

General Practice Series

THE TREATMENT OF PULMONARY TUBERCULOSIS

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The treatment of pulmonary tuberculosis may be likened to a pendulum which swings from one extreme to the other over the years, and which, during the last 10 years, has been passing through a phase in which the disease is treated with an ever-increasing number of antituberculous drugs. With every month that passes new variants are being added to the tried favourites; new techniques of administration are being advocated, and still newer drugs are being added to the list. This clinical appraisal is presented in the hope that it may shed some light on present-day drugs and regimes of administration.

Apart from the general principles involved in the treatment of any infectious disease viz. isolation, rest and feeding, it is now possible to assess more accurately the value of the various antituberculous drugs and to advocate certain lines of treatment based on world-wide experience.

DRUG THERAPY

Whatever drugs are selected, the patient's response to these should be backed up by clinical, laboratory and radiological assessment. It is useless to use a certain drug because it has a tuberculostatic or tuberculocidal effect—the aim must be eradication of the infection with the best possible means available. In general, drug therapy falls into two main sections: (1) that dealing with the known and proved agents, and (2) that dealing with the newer agents.

1. Known and Proved Agents

It is generally accepted that streptomycin, isonicotinic acid hydrazide (INAH) and para-aminosalicylic acid (PAS) should be used in the treatment of pulmonary tuberculosis. Their effect, dosage and method of administration have been the subject of numerous papers and it is possible now to advocate an optimal regime. But, although these drugs are the therapeutic agents of choice, they have certain disadvantages because (1) they can all produce a resistant strain of tubercle bacilli and (2) they all produce symptoms of toxicity or allergy in the patient.

Streptomycin. Recent research into the emergence of resistant strains of bacilli produced by the intermittent method of administration have shown that the most efficacious way to give this drug is to give daily doses of 1 g. by deep intramuscular injection. Emergence of resistant strains which could develop in 6 weeks under the old regime of 1 g. twice weekly has been abolished or delayed for longer periods by this method. It is also widely accepted, on the basis of controlled experiments, that this drug should never be used alone—the combination streptomycin/INAH or strepto-

mycin/PAS is more effective than the administration of each drug on its own.

The following toxic effects may occur: (1) Permanent damage to the auditory branch of the VIII nerve. This occurs in 6–10% of all cases treated. In certain individuals the vestibular branch of the VIII nerve may be affected, leading to a disturbance of the proprioceptive sense. This is, however, now rare, since purification of the drug has eliminated what used to be a serious consequence of its administration. The dihydrosalt appears to have greater toxicity for the hearing mechanism. (2) Sensitization phenomena such as skin rashes still occur and sometimes prove troublesome. They are best treated by withdrawal, antihistaminics and test doses to determine whether streptomycin is really responsible. (3) Agranulocytosis has been reported.

Isonicotinic acid hydrazide (INAH). Initially administered alone, it is now widely recognized that this practice leads to rapid development of resistant strains, consequently INAH is always given in combination with either streptomycin or PAS or both. It is also being used in conjunction with some of the newer drugs. The optimal dosage can be regarded as between 3–5 mg. per kg. of body weight per day, given orally in divided doses. Absorption is very rapid. Parenteral administration leads to peak levels in pleural and cerebrospinal fluids and tissues more rapidly than oral intake.

The principal toxic manifestation has been a peripheral neuritis, the symptoms of which resemble those of a vitamin B6 (pyridoxine) deficiency. These effects are noted when doses higher than 5 mg. per kg. of body weight are employed; but they may appear in certain individuals at lower dosage levels. INAH is recognized as having some effect on carbohydrate metabolism, and various types of interference with the utilization of sugars, particularly in diabetics, have been reported. Allergic manifestations do occur, as with many other drugs; but these have not proved of great moment.

Para-aminosalicylic acid (PAS) is at present used almost exclusively in association with other more potent antimicrobial agents such as streptomycin and INAH. Although it may be employed intravenously, intramuscularly, intrapleurally, or even intrathecally, oral dosage proves the most practical. The optimum dosage lies between 10–15 g. per day (average 12 g. per day) in divided doses. Strains of resistant bacilli develop in patients treated with this drug; but emergence of these strains is slow and treatment can be carried on for months or years.

The most common toxic effect is digestive disturbance—
anorexia, nausea, vomiting and diarrhoea. In certain indivi-

duals these may be of such magnitude as to require cessation of therapy. Other more serious side-effects are hypokalaemia, a goitrogenic effect, severe allergic reaction and signs of liver damage as shown by reduction in blood prothrombin and cholesterol, and by jaundice. These effects require withdrawal of the drug and change to another regime.

Combinations of Treatment. As each of the above drugs was discovered, it was used alone, and like all new weapons proved effective initially, but it soon lost that effectiveness through the emergence of drug resistance. Various investigators tried different combinations of these drugs, and it is now accepted: that (1) streptomycin-INAH is the most effective combination; that (2) streptomycin-PAS is useful in long-term policy; that (3) Streptomycin-PAS-INAH is now probably the most useful combination and the least likely to cause the emergence of drug resistant strains in the previously untreated individual and that (4) INAH-PAS can be given to cases where long-term drug cover is required, or where the facilities do not exist to give daily injections.

When using combinations of these 3 drugs, it is essential to request regular laboratory tests for the emergence of drug resistance in the organisms. In this way, time is not wasted in continuing treatment regimes which are ineffective, and at the earliest possible moment, a change can be made to a drug, or combination of drugs, to which the bacilli have not been previously exposed.

2. Newer Agents

In considering the drugs listed below it is as well to bear in mind that these, while having tuberculostatic properties, are not to be regarded as more efficacious than the first group. By comparison they are less potent than streptomycin or combined therapy—and in some cases are more toxic.

They can advantageously be employed, after drug resistance to streptomycin-INAH or streptomycin-PAS has emerged, for a period of several weeks or even months, to try to eliminate the resistant bacilli from the host—a change back to the streptomycin-INAH or streptomycin-PAS regime may then be made. The determining factor in the prolonged use of these 'intermediate' drugs is their toxic effect on the host.

Penicillin is ineffective against tubercle bacilli but is mentioned because in pyogenic complications of the disease, e.g. empyema, it exerts its usual beneficial action on suppurative infections.

Oxytetracycline. Good results have been reported in clinical treatment with oxytetracycline in conjunction with streptomycin. Its effectiveness appears to be like that of PAS in delaying the emergence of resistance to streptomycin. Its main drawback is the high (± 4 g. per day) dosage and attendant intestinal upset.

Viomycin is employed by some in the re-treatment of cases after unsatisfactory results with other drugs, rather than in the initial therapy of tuberculosis. Its use is thus restricted to cases where neither streptomycin nor INAH can be used to advantage because of intolerance to these agents or high degrees of bacterial resistance. Some success has attended its use in this way; but its dosage and effectiveness are limited by its toxicity. Its unfavourable action is manifested by headache, nausea and other symptoms of malaise.

Cycloserine is apparently less active than either streptomycin or INAH, but it has been reported effective as a single medicament in patients not previously treated with chemotherapy. Combined with standard daily doses of INAH or

2 g. of streptomycin per week it has led to definite improvement in patients whose clinical course was unfavourable on other regimes. In doses of 0.5 g. daily combined with 4 mg. of INAH per kg. of body weight per day, it constitutes an effective therapeutic regime of low toxicity.

Drug resistance occurs as rapidly, and to the same degree as in streptomycin and INAH and has been correlated with loss of clinical effectiveness. Toxic effects are psychogenic reactions in patients with psychotic backgrounds, hyperreflexia and mild epileptiform convulsions. The convulsions seem directly related to the size of the dose.

SURGICAL PROCEDURES

In a discussion of the treatment of pulmonary tuberculosis mention must be made of the part played by minor and major surgical procedures in the control of the disease.

Minor surgical procedures (collapse therapy). These procedures have to a large extent fallen into disuse through the effectiveness of chemotherapy but they should not be completely disregarded in the scheme of treatment since they may hasten the ultimate aim—that of control.

In brief they are: (1) phrenic crush, (2) artificial pneumothorax and (3) artificial pneumoperitoneum. These procedures are all aimed at influencing the disease process in the affected lung.

Major surgical procedures are widely employed and are directed towards effecting a permanent cure by removal of diseased tissue. They are all employed after a reasonable time has been devoted to chemotherapy and are followed by at least 12 months further chemotherapy. The operations performed range from (a) segmental resection of a portion of a lobe, to (b) lobectomy, and/or (c) pneumonectomy, followed by (d) thoracoplasty.

Modern anaesthesia and post-operative care have reduced the mortality and it is possible for bilateral surgery to be carried out on cases which were, some 10 years ago, regarded as hopeless. Not every case of pulmonary tuberculosis can, however, be regarded as suitable for surgery; the selection of cases requires thorough investigation and consideration by a team of physicians and surgeons.

COMMON COMPLICATIONS

The following are some of the common complications which occur during the course of the illness and brief notes on their treatment.

1. **Cough.** Unproductive irritating cough can be controlled in many cases by the use of expectorant mixtures, inhalations, or in the worst cases, by the administration of romilar, or a similar product. Productive cough should not be suppressed, but great relief from exhausting spasms can be obtained by postural drainage.

2. **Haemoptysis** is a most alarming symptom which usually responds to a subcutaneous dose of 1/6—1/4 gr. of morphia, followed by a sedative mixture such as mist. pot. brom. et chloral $\frac{1}{2}$ fl. oz. 4 hourly. In mild blood-staining of the sputum, the sedative mixture and strict bed rest may be sufficient to control the bleeding.

If the bleeding is more than staining of the sputum, it is better to give the morphia and at the same time administer one of the following coagulants: Adrenosem 2 c.c. intramuscularly or 2.5 mg. orally, or adrenoxyl in similar doses

(these two preparations may be given 4 hourly); koagamin 3 c.c. intravenously followed by 2 c.c. intramuscularly 2 hourly up to a total of 10–15 c.c. or Congo red 1% 10 c.c. intravenously.

Only in the most severe cases is transfusion necessary and then the blood should be given slowly, because too rapid administration may cause a rise in blood pressure and start the haemoptysis again.

3. *Diabetes mellitus*. This is a common complication of pulmonary tuberculosis and often proves difficult to control. It is best treated by giving soluble insulin, since the insulin requirements of the patient vary with the progress of the lung disease, and stabilization is best effected by using a short-acting insulin while the lung disease is active. Once the lung disease has settled down it is usually possible to switch to a medium-acting insulin; while in a few cases, a long-acting preparation may be used once the patient has returned to work.

4. *Drug rashes* are of infinite variety and may prove extremely troublesome. They are usually associated with streptomycin sensitivity and are best treated by withdrawal of all drugs and the administration of antihistaminics. Once the rash has been controlled, each drug is restarted separately while careful watch is kept for the reappearance of the rash. Desensitization can be attempted but may be

nullified by the appearance of drug-resistant bacilli. The elimination of the offender is, therefore, the safest procedure to adopt; other drug combinations can then be tried.

5. *Spontaneous pneumothorax*, if sudden and massive, may lead to death from mediastinal shift. Preliminary needling of the air space and the taking of manometric pressures after the withdrawal of some air, will indicate, by the failure to maintain a negative pressure after aspiration, whether a fistula is present. In this case intubation and underwater drainage is necessary. If a negative pressure is maintained, expectant treatment can be adopted.

6. *Pleural effusion* may cause severe distress if there is a massive accumulation. Needling and aspiration of a sample of fluid should be done early. If the fluid is straw-coloured and clear, aspiration by syringe until no more can be withdrawn, is indicated. If the fluid is at all hazy or turbid the presence of an empyema is indicated. Intubation with an underwater drain is now the method of choice for the pus must be drained. Daily instillations of 1 g. of streptomycin and 1 mega of penicillin are indicated until the underlying lung has fully expanded. If this does not occur, major surgery—decortication—is the next step.

7. *Pericardial effusion* may be a distressing complication and requires aspiration with the instillation of streptomycin and penicillin.

PROTEUS INFECTIONS SUCCESSFULLY TREATED IN GENERAL PRACTICE WITH BICILLIN AND STREPTOMYCIN

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Case 1. About 6 years ago (1952) a case of very severe vaginitis and inguinal adenitis was seen (Mrs. V.R.). Fever was present and evidence of toxæmia. The patient was listless and weak and had a profuse vaginal discharge with pains in both groins. As this was an unusually severe vaginitis, swabs were taken; culture showed a profuse growth of *B. proteus*. The swabs were repeated and again a culture of *B. proteus* was obtained. As a result of the sensitivity tests, treatment with erythrocin was suggested, though the tests showed the organism to be only slightly sensitive to this antibiotic. The patient had already been started on Bicillin, 1,200,000 units daily. For a few days, her condition remained unchanged; then after the 5th day there was a slow but steady improvement and in 2 weeks the case had cleared up. The only antibiotics used were Bicillin and erythrocin.

In view of the heavy penicillin dosage (a total of about 17,000,000 units of long-acting penicillin in daily doses over 2 weeks) I thought it would be worth while to test the *B. proteus* against stronger quantities of penicillin in the routine sensitivity tests. My idea was that heavy dosage with long-acting penicillin maintained for a long spell (about 2 weeks) would destroy *B. proteus*, even though routine sensitivity tests always showed *B. proteus* to be insensitive to penicillin. The clinical pathologist was therefore asked to use up to 500 units in the test instead of the routine 100. I wished to determine which of the antibiotics used was responsible for the satisfactory result achieved. The modified sensitivity test showed that *B. proteus* was extremely sensitive to the 500 strength penicillin used.

It is commonly recognized that *B. proteus* is a highly resistant organism, and it was a surprise to find it sensitive to the 500 unit penicillin test. The Bicillin treatment was therefore followed up in later cases of *B. proteus* infection. It was hoped that massive dosage would assist body defence mechanisms (enzymes, phagocytes and antibodies) which are absent in the *in vitro* test, to fight against this highly resistant organism. It is known what trouble this organism can cause, and how difficult it is to eradicate, especially in vaginitis and adenitis.

Case 2. The next case was seen about 5 months later—an elderly lady (Mrs. L.M.) with a chronic intractable colitis of long standing and apparently incurable. She gave a history of severe attacks of diarrhoea, colic and pruritus. X-rays had previously revealed diverticulitis. Stool culture gave profuse growth of *B. proteus* and a further specimen confirmed the existence of the organism. A course of Bicillin therapy was instituted. The first week the improvement was slow, but during the second week the patient was much more comfortable, and symptoms settled down; the number of stools was much less and colic and pruritus were much improved. Culture now gave a scanty growth, and the next culture no growth at all. The organism was not sensitive to penicillin in the usual *in vitro* sensitivity tests, but when 500 units were used it was definitely sensitive.

Case 3. A further case of vaginitis and inguinal glands then cropped up (Mrs. J.P.). Treatment with pessaries and sulphonamides failed to achieve an improvement. Swabbing revealed *B. proteus* and the 2-week course of Bicillin was started. Once again the result was very good.

As in the previous cases most headway was made during the second week.

Case 4. The next case (Miss R.M.) had colitis, with nausea, diarrhoea and colic, which did not clear up with the usual anti-diarrhoea and colic mixtures. Culture gave a profuse growth of *B. proteus*. No marked improvement resulted from an intensive and prolonged oral course of streptomycin (it is known that some *B. proteus* bowel infections will clear up under this treatment by mouth). Once again a course of Bicillin daily for 2 weeks proved effective; the nausea disappeared, the diarrhoea was now under control, and the colic was minimal. This patient suffered a relapse about 6 months later. The Bicillin was then repeated, but a culture still showed a scanty growth of *B. proteus*.

If a case showed a profuse growth during the first 24 hours and after treatment the culture was scanty, this, in my view, showed a definite response to therapy. In order to achieve a negative culture, it was considered advisable to add another antibiotic in cases where the stool was still positive and minor symptoms persisted. As with Bicillin, *B. proteus*, though insensitive to streptomycin in the usual maximum strength of 100, was found to be sensitive to 500 units of streptomycin.

Miss R.M.'s slight relapse was accordingly now treated by adding streptomycin by injection, Bicillin and streptomycin (1 g.) being given daily. The result was very satisfactory, and culture was now negative. The conclusion appeared to be that in a relapsing case streptomycin and Bicillin for about 2 weeks led to a cure.

Case 5. This was confirmed in the next case (Mrs. K.W.), who suffered from nausea, upper abdominal cramp, diarrhoea and urinary symptoms (burning and frequency). Stool culture gave a profuse growth of *B. proteus*. Bicillin daily was effective, but the stool remained positive. After a rest of about 1 week, the combined therapy of daily Bicillin and streptomycin once again met with success. This case, and all the others, have kept particularly well since the stools became negative.

Case 6. Mrs. T.R. had an unusual type of relapsing colitis. As there was no definite response to simple treatment, stool cultures were made and a profuse growth of *B. proteus* was obtained. This case was treated in the same way as the others and a very good result was achieved. As there was depressive psychosis present and institutional therapy was necessary, it was not possible to follow up the stool cultures. When asked to have repeat tests done, she refused, insisting that she had been cured. This is the only case where a final culture was not done. She was seen about 6 months after treatment was begun and then stated that there was no sign of any relapse.

Case 7. The next case was a child (M.P.) aged 6 months, with severe diarrhoea, vomiting, colic, and abdominal distension. Culture gave a profuse growth of *B. proteus*. Oral therapy with streptomycin was contra-indicated by the vomiting, and the child was therefore given Bicillin (half the adult dose) daily for 2 weeks. During the second week the condition was much improved and stool culture towards the end of the second week showed a scanty growth of *B. proteus*. Accordingly, 1/3 g. of streptomycin was added daily, and the stools when re-checked were found to be negative. No relapse occurred for several years.

Case 8. The last case to report was a child aged 4 months

(H.P.). The story was one of profuse diarrhoea, severe colic, insomnia, and mucus in the stools. This child had been subjected to all forms of therapy in an attempt to cure the infection. He had been given streptomycin, penicillin, tetracyclin and sulphatriad at different times, orally. These treatments met with no success at all, and diarrhoea, vomiting and colic, with abdominal distension, persisted. Another treatment which failed was oral streptomycin, freshly prepared. The stool culture gave a profuse growth of *B. proteus*, and a repeat specimen showed the same. A course of daily Bicillin was started (half the adult dose). After a week there was an improvement, but the stools were still positive. Combined therapy was therefore instituted ($\frac{1}{4}$ vial of Bicillin and $\frac{1}{2}$ g. of streptomycin daily) and continued for one week. There was a remarkable recovery, and, after a further week, the stools were negative, and the child was very much improved. A repeat stool culture made 2 months later was also found to be negative.

CONCLUSIONS

In 7 cases a cure of *B. proteus* infection was obtained by the treatment described. In these cases the *B. proteus* was shown on culture to have been eradicated, and in one other case, apparently cured, a final culture test could not be made. The cure rate with this treatment in my cases has been 100%.

The treatment is the daily injection of Bicillin for 2 weeks, and in resistant cases streptomycin (by injection) is added. Heroic dosage of an antibiotic hitherto regarded as useless against *B. proteus* has produced the successful results. A possible explanation is that the penicillin, long-acting and used in massive dosage, assists enzymes and body defence mechanisms which are not a factor in *in vitro* sensitivity tests. This method of therapy, and sensitivity tests modified in the manner described, may lead to further successes in the treatment of bacterial infections. It will be interesting to see what results are obtained with *B. proteus* infections in the bladder by courses of long-acting penicillin plus a bladder antiseptic or another antibiotic. This treatment is to be applied in the urological and neurological units of a Johannesburg hospital.

Bicillin by itself produces a cure in certain cases, but in others the combination of Bicillin and streptomycin (by injection) is needed to obtain a negative stool culture, making relapse unlikely. The use of streptomycin by itself, orally or by injection, has marked limitations. Massive streptomycin therapy by injection would be attended by dangers, especially vestibular.

Since certain antibiotics, such as streptomycin and neomycin, have but restricted use in the treatment of *B. proteus* infections, intensive therapy with long-acting penicillin may be applied in any type of infection at any site. For instance, in gynaecological infections associated with secondary glands, topical therapy may not be of great use, and parenteral antibiotic therapy as here described is then indicated. Gynaecological infections with *B. proteus* are very resistant to other forms of therapy.

Although Bicillin need not be given in such frequent doses for other infections, in *B. proteus* infections daily Bicillin injections are strongly indicated. It would appear that daily injections of a long-acting penicillin produces and maintains a higher blood level. The addition of an anti-allergic with each injection is suggested as a routine.

WORLD HEALTH DAY

The World Health Organization has a special World Health Day each year. On 7 April 1959, when its theme is to be 'Mental Illness and Mental Health in the World Today', all who are interested will have an opportunity to take an active part in the organization of public meetings, special short conferences, planning sessions, etc. in their own communities.

In notifying this theme, the letter sent from the Director-General of WHO to its member Governments says: 'Mental illness and the maintenance of mental health raise problems of varied importance and degree in different parts of the world. Very few countries, whatever their stage of economic development, do not have cause to be seriously concerned with the manifold aspects of this whole subject, which in some has even become sufficiently serious to constitute one of the foremost public health responsibilities . . .

'It is my hope that the choice of this theme for World Health Day 1959 will provide the member states with a valuable opportunity to awaken public opinion concerning the existing or impending threat from a further increase in mental ill-health, to spread information on the nature and causes of psychiatric and psychosomatic disorders and to gain support for the measures which are urgently required in order to prevent mental illness and promote mental health . . .

'I am sure that once again we can count on the cooperation of members and associate members in observing World Health Day not only as an occasion for enlightening

their peoples on health matters but also as an affirmation of the unity of our efforts for a healthier world.'

Through the medium of our *Journal* we, too, wish to participate in this appeal. We have on various occasions in the past^{1,2} drawn attention to the unsatisfactory state of the Mental Health Services in our country. We do not, however, intend to maintain a negative attitude. We have now requested a number of well-known psychiatrists to take part in a symposium on the possibility of establishing facilities for the treatment of persons suffering from neurotic conditions or from the milder forms of mental disturbance.

In the approach to so comprehensive a problem as that of providing satisfactory mental health services, one must at some point make a definite and positive start. We feel that the discussions which we publish in this issue on the facilities for treatment of the milder forms of mental aberration indicate a possible point of departure.

In this important cause we must enlist the cooperation of the Medical Association as a whole. May we, therefore, repeat the plea made on a previous occasion:² 'The duty falls on the medical profession, with its great responsibility to the people it serves, to call immediately for a Commission of Enquiry to investigate the state of psychiatric services at the present time on a truly national basis, and to have included in the terms of reference of such a Commission not only repair of our present failing facilities, but also planning for more adequate services in the future.'

1. Van die Redaksie (1958): S. Afr. Med. J., 32, 652.

2. Editorial (1958): *Ibid.*, 32, 996.

WÊRELD-GESONDHEIDSDAG

Die Wêreld-gesondheidsorganisasie reël elke jaar 'n spesiale Wêreld-gesondheidsdag. Die tema vir hierdie dag, op 7 April 1959, sal wees: 'Geestesiekte en Geestesgesondheid in die Wêreld van Vandag.' Die Direkteur-Generaal van W.G.O. sê in sy brief aan ledegerings, waarin hy die tema en die dag aankondig: 'Geestesiekte en die behoud van geestesgesondheid stel ons voor 'n probleem wat verskil in belangrikheid en graad in verskillende dele van die wêreld. Daar is baie min lande, wat hul stadium van ontwikkeling ook al mag wees, wat nie rede het om ernstig begaan te wees oor die veelvuldige aspekte van hierdie probleem nie . . .

'Ek hoop dat die keuse van hierdie onderwerp vir die Wêreld-gesondheidsdag in 1959 ledestate 'n goeie kans sal gee om die openbare mening op te wek oor die bestaande dreigende gevare van verdere verswakking van die algemene geestesgesondheidstoestand, en ook om kennis oor die aard en oorsake van psigiatrisie en psigosomatiese versteurings te versprei . . .

'Ek is seker dat ons weereens sal kan reken op lede en medeleders om die Wêreld-gesondheidsdag nie net te beskou as 'n inligtingsgeleentheid oor gesondheidsake nie, maar ook as 'n geleentheid tot positiewe stelling van die eenheid van ons strewende om 'n gesonder wêreld te bereik.'

Deur middel van ons *Tydskrif* wil ons ook graag aan hierdie oproep meedoen. Ons het reeds by verskillende geleenthede in die verlede^{1,2} geskryf oor die onbevredigende

toestand van geestesgesondheidsdienste in ons land. Ons bedoeling is egter nie om steeds negatief op te tree nie. Daarom het ons nou 'n aantal vooraanstaande psigiaters gevra om deel te neem aan 'n simposium oor die moontlike daarstelling van fasiliteite vir die behandeling van persone wat aan die een of ander van die neurotiese toestande lei of aan die ligtere grade van geestesversteuring.

By 'n probleem wat so 'n groot omvang het, soos die probleem van bevredigende geestesgesondheidsdienste, moet 'n mens êrens 'n definitiewe en positiewe begin kan maak. Ons voel dat die samesprekings wat ons in hierdie uitgawe plaas oor fasiliteite vir die behandeling van ligtere vorms van geestesafwyking, so 'n beginplek aandui.

Die samewerking van die hele Mediese Vereniging vir hierdie groot saak word gevra. Laat ons dus weer herhaal wat ons vroeër gesê het:² 'Dit is die plig van die mediese professie, wat so 'n groot verantwoordelikheid het teenoor die mense wat hy dien, om dadelik te versoek dat 'n kommissie van ondersoek aangestel sal word om die huidige toestand van psigiatrisie dienste op 'n nasionale grondslag te ondersoek en om toe te sien dat die opdrag van so 'n kommissie nie net herstel van ontoereikende dienste insluit nie, maar ook beplanning vir meer bevredigende dienste in die toekoms.'

1. Van die Redaksie (1958): S. Afr. T. Geneesk., 32, 652.

2. Editorial (1958): *Ibid.*, 32, 996.

Symposium

THE TREATMENT OF THE PSYCHONEUROSES AND MINOR MENTAL ILLNESS

1. Present Facilities and World Trends

DR. H. MOROSS, M.B., B.S. (DUNELM), D.P.H. (RAND),
Medical Superintendent, Tara Hospital, Johannesburg, writes:

Since the establishment of Tara Hospital for Nervous Diseases in 1946 as a public hospital of the Transvaal, there has been an ever-increasing demand on it for the treatment of psychoneuroses and minor mental illness not only from persons resident in the Transvaal, but from all over the Union of South Africa as well as from territories beyond its borders. This clearly indicates the need for extending facilities for the treatment of the psychoneuroses and minor mental illness.

The Transvaal Provincial Administration caters for these illnesses, so far as it is the function of a provincial administration to do so. As I am familiar with the development of this service I shall describe its extent before suggesting what I believe should be done to develop services elsewhere in South Africa.

1. A Department of Psychological Medicine at the Johannesburg Hospital

(a) This department is in the charge of a full-time professor of psychiatry, who is head of the Department of Psychiatry and Mental Hygiene of the University of the Witwatersrand; he is a member of the staff of the Johannesburg Hospital and of Tara Hospital for Nervous Diseases; and is consultant at Sterkfontein Hospital. In addition, the resources for the teaching of psychiatry at Baragwanath and Coronation Hospitals, as well as of the Johannesburg central group of hospitals are at his disposal.

(b) One ward of about 30 beds at the Johannesburg General Hospital is available for the treatment of the sort of psychiatric cases that are manageable in a general hospital setting.

(c) Daily psychiatric out-patient clinics. In the last 12 months over 10,000 patients were seen at these clinics, which were held at the Johannesburg General Hospital. Patients are referred by the other departments of the hospital, by general practitioners, by social agencies, and by other Transvaal public hospitals. The clinics are in the main diagnostic; but special facilities are arranged for individual and for group psychotherapy at the out-patient level. In 1958, 909 attendances were registered at these groups. The staff is provided by Tara Hospital. Only 3-4% of the cases seen are certified and sent to mental hospitals. It is highly probable that, notwithstanding the number of cases seen, many more cases which could be classified as psychogenic are seen elsewhere in the hospital other than at the psychiatric clinics and that the total number passing through the General Hospital is therefore larger than the figures indicate.

(d) In-patient psychiatric consultative and therapeutic service. Two members of the Tara Hospital staff are attached to each of the medical firms and the corresponding surgical firms for consultation and psychotherapy in respect of patients accommodated in these firms (also for the teaching of undergraduate medical students). In addition, consultative services are available to the Transvaal Memorial Hospital for Children, the Non-European Hospital, the Queen Victoria Maternity Hospital and the City Fever Hospital. The foregoing services make the integration of psychiatry with general medicine possible; and not only with general medicine, but also with surgery, gynaecology, paediatrics and other branches of medicine. From the teaching point of view this is important.

2. Tara Hospital for Nervous Diseases

In essence, this is a unit for the treatment of the more serious and more urgent psychoneuroses and minor forms of mental illness, where physical and psychological treatment is carried out, and where more intensive social therapy can be provided than in the General Hospital. (Tara also caters for neurological cases.)

There is a close affiliation with the Johannesburg Hospital for treatment and teaching. Apart from the usual treatment facilities,

3 important services are provided, viz. a 'day section', a domiciliary service, and a children's out-patient service.

3. Pretoria, Edenburg and the Reef Public Hospitals

Each hospital has a part-time psychiatrist on its staff.

4. Outlying Public Hospitals in the Transvaal

Tara Hospital provides a consultative service to these hospitals as and when required.

In all the services enumerated above patient activity is sustained, as well as the demand for treatment.

WORLD TRENDS

If this is the situation in the Transvaal it is highly probable that a similar need exists in the other provinces of the Union. Before proceeding to suggest lines along which thought should be given for the development of services elsewhere, I want to list a few trends which I believe to be discernible.

During recent meetings of the Executive Board of the World Federation for Mental Health in the United Kingdom and Europe, I have had opportunities for obtaining information about facilities which exist in different parts of the world for the treatment of the psychoneuroses and minor mental illness, as well as on trends in planning for such services for the future.

1. Staffing

In order to provide the staff necessary for existing needs, and for the development of future services, training facilities must be adequate so as to encourage aspirant psychiatrists, clinical psychologists, psychiatric nurses, social workers, occupational therapists, physical educationists, and community health workers to join them. Staff ratios continue to cause worry and in many places are barely sufficient to give adequate, let alone efficient, service. Various surveys are being conducted to determine the reasons for this shortage and to estimate rates of attrition in various full-time salaried services. Sometimes it is not clear whether conditions of service are all that they might be.

2. Psychiatric Departments in General Hospitals

In many of the teaching centres in different parts of the world the general pattern more or less corresponds to the service as it obtains in Johannesburg.

In England, the division of responsibility for bodily and mental ailments between different layers of Government have been overcome, in that regional hospital boards are vested with the responsibility for both.

In Canada, the movement is more and more in the direction of the development of psychiatric units in general hospitals. Here the administration of health services, and in particular mental health services, is in general the responsibility of provincial and local authorities. One of the causes for the entry of psychiatry into the general hospital is found in modern methods of early treatment of psychiatric conditions. Another is that it is now generally recognized that a knowledge of the psychological element in disease is important to general practitioners and to specialists in the various branches of medicine and surgery, as well as a knowledge of the psychological treatment of such disorders.

It is recognized, too, that specialists in psychiatry have an important part to play in the treatment of patients in general hospitals in consultation with the specialists in the other branches of medicine. Also, it is believed that there are aspects of psychiatry that can be better taught in the general hospital. This does not make the psychiatry of the mental hospital any less important to the medical student, and the answer to the problem is to make teaching and experience in both fields available to him. May I say, for the sake of completeness, that the Committee on Standards of the American Psychiatric Association suggests that something between 5-15% of all beds in teaching general hospitals should be allocated to psychiatry, and that

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1. *Present Facilities and World Trends*
2. *Psychiatric Services in General Hospitals*
3. *Basic Principles*
4. *General Considerations*

there should not be less than 20 beds, because below this number there is not enough flexibility to be effective?

A small hospital should consider some sort of psychiatric consultation service.

3. *Ambulant Services and the Community Service*

The extension of ambulant services and the community service is a current international trend. The ambulant services include the day centre, the night centre, out-patient services, and the therapeutic social club. The ambulant services and the community service have been described in a contribution to this symposium by Dr. L. S. Gillis.

At the moment, although the final testimony regarding clinical results from the day centre and the night centre is somewhat guarded, it can be said that many patients who at one time would have received in-patient care have been successfully treated there.

THE GENERAL PLAN

A master plan is clearly essential in the development of the foregoing services. Changing facilities, however, demand that any plan for the future must be adaptable to the needs of the time and the place. Whenever extra-mural psychiatric services are being developed in relation to the psychiatric departments of general hospitals, the latter are seen as the strong central hub, the in-patient section being the area where the powers of the organization are aggregated in the form of the greatest concentration of staff. Here in this central hub is brought together the maximum strength of the department. Established outside it and supported by it are concentric rings of other diagnostic and therapeutic structures—the neurosis unit, the day centre, the night centre, the out-patient service, the therapeutic social club. Beyond this there would perhaps be an out-patient therapy unit (away from the hospital) to which individuals might come once or twice a week for special physical treatments and, lying still further out, the follow-up community service. Each of these concentric rings, as we pass outwards, requires less of the powers of the central hub of the department. The concept is that the patients are increasingly able to get along by themselves, to work and live at home, except for the limited support given by the particular therapeutic organization to which they have been assigned.

It is highly probable that the development of facilities for the treatment of the psychoneuroses and minor mental illness will be an evolutionary process, the starting point of the general plan being one of the components described above. The development will probably extend to the others over a period of time on a coordinated and integrated basis, each facility basing its function and standards of service upon its role in the whole pattern of the service of the area.

The foregoing is not an exhaustive analysis, but I offer these thoughts in support of the general point that we may need to think out anew our policies, our training and perhaps our techniques in relation to the present time and to the next 25 years rather than to the last 25 years.

2. *Psychiatric Services in General Hospitals*

DR. H. WALTON, M.D. (CAPE TOWN), D.P.M. (LOND.),
Senior Lecturer, University of Cape Town, and Psychiatrist,
Groote Schuur Hospital, writes:

Present Status of Psychiatry

The great strides psychiatry has taken in other countries have yet to occur in South Africa. The narrowing of the gap between general medicine and the field of mental disorder has not taken place. An outcome of this divorce of psychiatric practice from the main body of general medicine is the survival permitted to

an antiquated fallacy: that of equating psychiatry as a whole with the custodial needs of the insane. Only by insulating psychiatrists from the field of general medicine can the myth be maintained that the needs of patients in the psychiatric sphere are adequately met once the country has had 10 mental hospitals established.

This *asylum-outlook* derives from an uninformed and narrow view of what constitutes psychiatry. The stage of psychiatric development in our country, historically, is that of the mid-19th century, after Chiarugi and Pinel had unchained the mental patients, deprived keepers of their dogs, and urged humane treatment for people who were not inhuman although they had become cut off from others. Griesinger argued nearly 100 years ago that while psychiatry uses concepts of its own, medicine and psychiatry are related disciplines. An early gain from this *medical orientation* towards mental disorder was the discovery by Wagner-Jauregg that malarial therapy cured a fatally-progressive mental illness, general paresis. After this contribution from general medicine, the neurologists of the late-19th century made a great contribution to the *concept of psychoneurotic illness*. Charcot and Freud developed the awareness that minor mental illness is often due to a 'pathogenic idea' (which may be unconscious) in the mind of the patient who, physically, is perfectly healthy. The patient's 'illness' consists of faulty patterns of reaction to his environment. These patterns are learnt during childhood, and can be unlearned by corrective emotional experiences provided by psychotherapy.

Another *fresh development* in contemporary psychiatry, yet to find representation in our country, is derived from the *child guidance movement* early in this century. Psychiatric treatment methods were influenced in the direction of teamwork. A doctor alone did not suffice to deal with many disorders, but a combination of many therapeutic influences was called for—from psychiatrists, physicians, social workers, occupational therapists and representatives of the community (e.g. employers, ministers of religion, and school-teachers). Such influences often find the most coordinated expression in a *therapeutic community*, which mental hospitals should carefully strive to be. In this way concerted efforts can be made to revive the patient's self-respect, so that by expressing his own abilities he can regain his social and working status in his community. Recently psychiatry has come closer to general medicine through the *concepts of psychosomatic disorder*: an illness expressing itself in physical symptoms may have aetiological components calling for psychiatric treatment.

These recent developments in psychiatry have had only *rudimentary acknowledgment in South Africa*. Doctors now in practice will recognize to what extent they were taught only the portion of psychiatric knowledge which (for historical emphasis) may be called *asylum psychiatry*. Medicine is being practised without the necessary facilities for proper handling of minor mental illness (the psychoneuroses and personality disorders) and psychosomatic illness. Moreover, the state of our mental hospitals gives grounds for grave disquiet even within the mental hospital service itself where doctors, often untrained, have to cope with too many patients.

This is a medical responsibility no doctor can lightly ignore. Can we be content to send our patients to the mental hospitals when we know that overcrowding and inadequate treatment makes for progression, deterioration and chronicity in mental illness? The 10 mental hospitals constituting our country's mental health service are a monument to the disregard of the principles that the best psychiatric treatment is that given while the patient can still function in the community; hospitalization is not necessarily therapeutic. Our mental health service, so-called, provides no follow-up care for the discharged patient, has no social workers, in fact no machinery for helping the patient to re-adjust himself in his community. By contemporary standards, our closed mental hospitals with their locked wards and isolation from the surrounding community, are anachronistic.

Such pilot establishments as Tara Hospital, and the fact that some of our university teaching hospitals already admit psychiatric patients, have not affected the prevailing medical torpor. On the contrary, the sods are already being turned in the Cape Peninsula for yet another vast mental hospital.

A *realistic start* to the provision of psychiatric services can be made by setting up psychiatric units in general hospitals. In the teaching hospitals such units should undertake the additional

responsibility of studying the measures required to lift us out of the stagnation affecting this field of medicine.

Facilities at Groote Schuur Hospital

A full-time psychiatrist has been on the hospital staff since 1957. Part-time psychiatrists work twice weekly at afternoon out-patient clinics. Both European and non-European in-patients are admitted for treatment and study of minor psychiatric disorders to a joint department of neurology and psychiatry. Post-graduate theoretical discussion meetings are held weekly, and clinical case conferences take place fortnightly. The patient material is also drawn on for undergraduate teaching, patients being allocated for student case-work. In addition each patient is allocated to a student nurse for her to obtain experience in establishing a personal therapeutic relationship as distinct from a technical nursing relationship. Each week the nurses meet as a group with a ward doctor. The house physicians and registrars obtain psychiatric and psychotherapeutic training under close supervision, usually continuing to see, after discharge, some of the patients cared for initially as in-patients.

The work of this department is seriously curtailed by inadequacy of staff. Adequate treatment can only be carried out for a few patients. The proportion of staff in a psychiatric department needs to be greater than in other branches of medicine, owing to the method in which psychiatric data is obtained and treatment conducted. Information is obtained from a psychiatric interview for which adequate time is required—usually an hour for each interview—and a particular patient may require a number of interviews before a relationship is established which enables the patient to impart his secret preoccupations. A single patient may have to receive psychotherapy for many months.

Group psychotherapy permits the psychiatrist to treat about 8 patients simultaneously. Two closed groups are in process at this hospital, the senior group having already met over a period of 15 months. The purpose of group therapy is to create a major change in personality for severely disturbed patients.

A recent extension of the department is the newly-established Cape Provincial Hospital for the treatment of alcoholism, the Park Road Hospital.* Provision is made for 30 in-patients, for day-patients and for extensive follow-up care.

In addition to direct responsibility for patients treated for minor mental illness, considerable additional tasks are imposed on the psychiatric department in a general hospital:

The Psychiatric Department in a General Hospital

1. *Teaching of medical students.* In a university teaching hospital the opportunity is provided to impart to future doctors an adequate understanding of psychiatric methods. Family doctors have to be given suitable training, because the problem of psychoneurotic illness is too vast to ever be dealt with through individual psychotherapy conducted by trained psychiatrists. (Few psychiatrists, in fact, receive specialist training in psychotherapy.) Through suitable teaching, some students may be encouraged to seek a psychiatric career for themselves. Unsatisfactory teaching of students may be an explanation of why so few first-rate students in this country have taken up psychiatry.

By its nature, the teaching of psychiatry imposes difficulties. A large staff is necessary. Twenty students can inspect one inguinal hernia or auscultate one stenosed mitral valve, but only one student at a time can interview a patient intensively enough to gain an understanding of the intimate and painful preoccupations at the basis of a psychoneurotic disorder. Moreover, each patient will permit only one student to undertake such a psychological investigation. To be taught psychiatry, the student has to be brought close to emotionally-disturbed people, to practise his own skills in the field of the patient's social disorganization. He can be taught the necessary techniques only if there are sufficient trained instructors with sufficient time at their disposal.

The great need for training personnel is a major reason for establishing psychiatric departments in general hospitals. In any hospital which trains nurses, social workers or occupational therapists there should be a realistic representation of psychiatric patients. As matters stand, every general hospital has its proportion of psychiatric patients, whether they are recognized as such, or merely have the tag, 'nothing abnormal detected' initialled on their case notes. When at length the time comes to discharge these patients, the respective laparotomy, X-rays or laboratory investigations have merely deepened, and not resolved, the clinical perplexity.

* See report on p. 280 of this issue.

2. *Consultative services to other hospital departments.* The psychiatrist is called in consultation to wards other than his own under a variety of conditions. The physical investigation may have been negative, and the physician, surgeon or gynaecologist then looks to the psychiatrist for an explanation of the patient's symptoms, e.g. a suspected ulcer patient who continues to have severe pain after a negative laparotomy. On the other hand, the patient may well have appropriate somatic impairment, but displays some behaviour disorder which disrupts the ward routine, e.g. an old man before a cataract operation may suddenly become wildly agitated, his intellectual impairment having been unrecognized before his confusion manifested itself; or a girl with vaginal bleeding admitted to the gynaecological ward after attempted abortion may make efforts to throw herself out of the window in a suicide bid. However, the psychiatrist is often asked to treat patients with psychosomatic disorders, the referring doctor recognizing that the patient has a disorder of personality, quite apart from his physical illness, and that treatment of the emotional disorder holds promise of alleviating the somatic symptoms.

This last demand imposes a great, and steadily increasing, burden on the hospital psychiatrist. Potentially, each patient represents a treatment problem that cannot be met because the psychiatrist's time is so limited. The time factor is, perhaps, the hospital psychiatrist's main difficulty. Any patient might suddenly make imperative demands, and if the psychiatrist is not able to respond with his full attention, the outcome might be tragic. Furthermore, a desperate person needs not only an interview, but also an emotional response from the psychiatrist. A harassed psychiatrist is not an effective one.

The psychiatrist has the privilege of changing the general atmosphere in the hospital in the direction of greater sensitivity towards the personal aspects of the patient, e.g. after only meagre reassurance a sister in a medical ward may prove herself exceptionally perceptive to the emotional needs of a suicidal patient, whom she had previously declined to nurse in her ward. The psychiatrist may in his consultations enable his colleagues in other branches of medicine to perceive the importance of unconscious motivation, of the irrational aspects of the patient's dependency on the doctor, and even how a doctor can have irrational responses to patients.

3. *Community needs.* The psychiatric department in a general hospital should be the centre for meeting the psychiatric needs of the surrounding community. At present, general practitioners have to cope with the problem and, because of the lack of adequate facilities for treatment psychoneurotic patients drift from doctor to doctor and hospital to hospital. Their doctors request treatment for them or send them to out-patient departments, but until adequate psychiatric units are established the attention given will be little more than diagnostic and in the nature of general advice.

Psychiatry today is as much concerned with patients in the community as it is with in-patient care. If a patient cannot cope socially, he may need only short admission until he has recovered from his emotional decompensation, or until he feels sufficiently adequate once more to take his place in a difficult home situation. These patients should never be admitted to a mental hospital, if the illness is of a minor and transient nature. The illness should be treated in the local hospital, in accordance with contemporary standards. Only in this way will the isolation of psychiatry from the main body of general medicine be overcome.

3. Basic Principles

DR. L. S. GILLIS, M.D., D.P.M., *Psychiatrist, Johannesburg, writes:*

Several basic principles must be considered in planning a service for the treatment of psychoneuroses and minor mental illness.

1. *Flexibility*

A fully effective service should be highly diversified in its facilities and must be capable of a considerable degree of flexibility so that the treatment of the individual case may be more or less adapted to his needs. Thinking in psychiatry has reached a stage of sophistication where we need no longer plan in terms of one large in-patient hospital catering for all needs, but rather of separate, yet coordinated and co-functioning smaller units with special

functions although perhaps accommodated under one roof. Ideally, there should be one of these composite organizations for each region, and it should consist of arrangements for in-patients, day patients, night patients, out-patients, a therapeutic social club, and most important, a community service. None of the separate units need be large or costly since in functioning together they make for a rapid turnover of cases.

2. Continuity of Management

To get the fullest advantage from this interlocking physical structure it is essential to organize it in a way that will facilitate a continuity of management of all cases dealt with. Psychiatric treatment must be viewed as a continuous process and planned as a comprehensive whole for each case from the patient's first contact with the psychiatric service to the end of the last of its acts, that of rehabilitation and after-care. In this way it will be possible for the patient to move progressively nearer to his normal life and community under the aegis of the same organization. For instance, he may move from the in-patient section to the day hospital and the community service as his treatment progresses. Rehabilitation and after-care are part of the process of recovery and must not be thought of as separate from treatment, as has sometimes been done.

3. Suitable Personnel

It is necessary to place emphasis on the fact that it is more important to train suitable personnel than to provide expensive buildings. We must invest in brains, not bricks, and the schemes outlined in this symposium will be futile if we are unable to find adequate personnel. Successful treatment of the psychoneuroses depends to a very large extent on the therapists, and the personal interrelationship between therapist and patient is more important than medication. Success also depends on the cooperation of a team of suitably trained personnel, e.g., psychiatrists, psychiatric nurses, psychologists, psychiatric social workers, and occupational therapists. Facilities for training exists for most of these groups in South Africa. Sufficient numbers of trainees, however, are not always forthcoming. Psychiatric social workers, play therapists and psychiatric community nurses are badly needed, but they cannot be trained in this country.

4. Domiciliary Treatment

As far as possible neurosis should be treated on an out-patient or domiciliary basis with the patient maintained in his normal community and in his usual life activities. We are fortunate that most patients suffering from psychiatric illness are ambulatory and also that most psychiatric treatments do not necessitate in-patient hospitalization. There are, of course, many cases that must be removed from too-stressful circumstances for a while, but they form a minority and there is little justification for basing an entire psychiatric service on their needs. If hospitalization becomes necessary it should be minimal in time and extent for each case, and its aim should be to provide active short-term treatment. An investigation at Tara Hospital has shown that over 95% of cases who benefited from in-patient treatment did so within a period of 100 days and that there is usually little reason for keeping patients with psychoneurosis and minor mental illness in hospital longer than this. A certain number of in-patient beds will, of course, always be required to deal with the acute phases of illness, but once these are over it will be better for the patients to move to the day hospital or the out-patient department as part of their rehabilitation.

5. Other Facilities

If minimum in-patient hospitalization is provided, it is important to make other facilities available in, or close to, the community. These facilities must all be easily accessible and situated in the centre of the population to be served. Great mutual benefit is to be derived from close physical and organizational contact with a general hospital—in fact, this is probably the situation of choice from many points of view. It is clear, however, that psychiatric patients have very different therapeutic needs from the general run of hospital cases. Other facilities should be established, as follows:

The day hospital affords an effective and highly economical way of providing close-to-maximum hospital care while retaining the patient in his normal community. It is possible to handle many cases of neurosis in this way which would previously have been considered only fit for full in-patient hospitalization. No

residential accommodation is required, no special buildings need be erected, the equipment needed is modest and inexpensive, running costs are markedly less than for comparable in-patient facilities, and staffing needs are not excessive. Day hospitals may function quite separately, but are preferably incorporated with other psychiatric facilities in a coordinated scheme.

The night hospital. This is an arrangement that combines well with the day hospital because it is possible to use the same premises for a different batch of patients at night. Patients arrive after work, have their various treatments (E.C.T., psychotherapy, etc.), and return to their homes or their work in the morning. This has advantages for a certain selected group of patients, but staffing problems arise and in practice it is considered that the day hospital is a more useful organization.

The out-patient service. Most psychiatric treatments can be carried out satisfactorily on an out-patient basis, and for many cases, especially those needing long-term psychotherapy, it is the method of choice. For full effectiveness, however, something more than a routine diagnostic and consultative service is necessary, and specially designed arrangements for giving physical treatments like electro-convulsive therapy, and a psychotherapy unit, are needed. An immediate problem that arises in regard to a psychotherapy unit is to supply a sufficient number of skilled psychotherapists. This problem may be solved by using part-time therapists, after-hours sessions, and perhaps clinical psychologists. Group psychotherapy is another effective way of dealing with neurosis both thoroughly and economically.

The therapeutic social club is an organization that serves as a stepping stone in the rehabilitation of the patient to fuller participation in his environment. Most of its members will have been treated in some other section before and now meet weekly on a social level under the supervision of members of the psychiatric team. A club such as this is largely run by the patients themselves and is planned to provide continuity of observation, treatment and graded rehabilitation in conjunction with the other facilities already mentioned.

The community psychiatric service. By this is meant the treatment of patients with psychiatric illness in their homes, places of work and schools rather than in hospitals. Emphasis is placed on prevention, early detection of illness, rehabilitation, after-care and maintenance of the chronic patient in his community. This is a most important development in psychiatry and no planning for the future can neglect to incorporate such arrangements into the scheme of things. The essence of community care is domiciliary treatment by a team of professional workers and, in order that all the medical, social and occupational needs of the patients can be met, psychiatrists, psychiatric nurses, social workers, psychologists and occupational therapists are needed. This team should function in conjunction with the in- and out-patient services, and for full efficiency, should tie up with other agents already in the field, such as general practitioners, industrial and school medical officers, district and public health nurses, mental health societies, child guidance clinics, etc.

These facilities constitute the elements for an ideal, though not unattainable, scheme and, when for financial reasons or because the numbers of patients do not warrant it, a more limited service is required, they can be pruned down to suit the particular circumstances. For instance, a small scheme might consist of a psychiatric ward in a general hospital as the base, connected with an out-patient service and a small day hospital situated centrally (a large converted house serves the purpose adequately). Provision should also be made for a small community service.

In conclusion I should like to stress the importance of co-ordinated planning so that, even if the facilities needed can only be established singly, planning should still be done in accordance with a comprehensive scheme which takes into account the other sections to come. It is also not enough to meet only present needs. This is a time of change in psychiatry and we must recognize the fact that new advances have been changing its emphasis and will continue to do so. For this reason planning must provide for more than the conventional handling of established mental illness and must take into consideration avenues and venues not previously fully exploited, e.g. community services, day hospitals, and rehabilitation centres. Planning must also take into account those aspects of psychiatry that have been neglected, such as mental health education, prevention, after-care and rehabilitation, and it must allow for flexibility of arrangements and for the easy adaptation of buildings to meet changed needs.

We must not seek to erect structures to last a hundred years when it is quite possible that they will outlive their usefulness within a generation.

4. General Considerations

DR. B. CROWHURST ARCHER, M.D., *Psychiatrist, Durban, writes:*

The provision of a satisfactory mental health service for South Africa presents certain difficulties because of the size of the country and the uneven distribution of its multiracial community.

With the introduction of successful methods of physical treatment and the recently-proved economic and therapeutic advantages of early treatment centres situated in the 'catchment areas' of mental hospitals, the problem is not, however, as great as it would at first appear.

Early Treatment Centres

The present overcrowding in mental hospitals could be relieved by the gradual establishment throughout the Union of early treatment centres in the 'catchment areas' of the mental hospitals. They should be run on similar lines to the Antwerp¹ and Worthing² experiments which provide a small number of beds on a day-patient system which is a compromise between an in-patient and out-patient service, and full facilities for domiciliary treatment. It has been shown that this district mental hospital system has so reduced the number of admissions to the neighbouring mental hospitals that it is contended that no further mental hospital need be built until these experiments have been fully worked out. As I have pointed out elsewhere³ a pilot scheme of this kind should be started immediately in Durban. This city which is over 50 miles away from the amenities of the nearest mental hospital, will have to rely on its own resources, and is large enough to do so.

I have also recommended⁴ a pilot scheme, on similar lines to the psychopathic hospital which has been established in Denmark, for the control and socialization, if possible, of persons suffering from psychopathic personality.

General Hospitals

The importance of the specialized mental hospital and its district mental hospital system should in no way excuse the general hospitals from providing facilities for treating mental illness.

The psychiatric department of every university medical school should be under the direction of a full-time professor of psychiatry who should have at his disposal for teaching purposes an adequate number of beds and out-patient clinic and auxiliary services—psychiatric social workers, non-medical psychologists and occupational therapists.

The range of activities of the psychiatric teaching unit should provide adequate training in psychiatry—in the out-patient department and the wards of the unit, for general practitioners

and intending specialists, and psychiatric auxiliaries, including probation officers, health visitors, and similar workers. This unit should also establish, for teaching purposes, a close working liaison with institutions and services outside the unit so as to provide supplementary instruction and teaching material.

A children's psychiatric clinic should be an integral part of the psychiatric teaching unit and act in a consultative capacity to the child guidance centres in the region. Such a unit should also be a psychiatric teaching centre and coordinating focus of psychiatric research.

The Nursing Problem

The enrolment of auxiliary nurses, both in the early treatment centres and the psychiatric units of general hospitals, might contribute towards a solution of the problem of the acute shortage of nurses, provided the necessary teaching and training facilities are made available.

During the last war I commissioned and had charge of two Royal Naval Hospitals which I staffed in part with specially selected Red Cross V.A.D. nurses. They not only made a definite contribution to the morale and discipline of these establishments, so essential to any form of rehabilitation, but after training for a period of 3 — 6 months they became useful members of the psychiatric team. It is also interesting to record that some of these nurses, as a result of the teaching and training they received, qualified after the war as psychiatric social workers. Such auxiliary nurses would again become necessary in the events of war, national emergencies or other disasters.

Promotion of Mental Health

The preventive and rehabilitation aspects of mental illness should be the responsibility of the Public Health Services and Regional Officers of Mental Health should be appointed by the Commissioner for Mental Hygiene. The function of these full-time psychiatrists would be to work outside the mental hospitals and to coordinate and cooperate in all matters of mental health, especially with the Departments of Education, Social Welfare, Labour, the local authorities and the various voluntary social organizations.

Conclusion

The need to investigate the whole question of a mental health service for this country in a scientific and constitutional manner at the highest level is now urgent because there is a danger that the outmoded recommendations of the last Commission of Enquiry, which were published as long ago as 1937, may be implemented. This would mean that the old uneconomic and therapeutically sterile policy of custodial care and 'bigger and better hospitals' would be further entrenched.

REFERENCES

1. Quarido, A. (1954): *Brit. Med. J.*, 2, 1043.
2. Carse, J., Panton, N. E. and Watt, A. (1958): *Lancet*, 1, 39.
3. Archer, B. C. (1958): *S. Afr. Med. J.*, 52, 1006.
4. *Idem* (1958): *Ibid.*, 52, 411.

THE EXCRETION OF PORPHYRINS AND PORPHYRIN PRECURSORS BY BANTU CASES OF PORPHYRIA

H. D. BARNES, M.Sc., Ph.D., A.R.I.C., *The South African Institute for Medical Research, Johannesburg*

It has recently been shown¹ that Swedish patients with intermittent acute porphyria and White South African patients with variegate porphyria, who may present either cutaneous manifestations or acute symptoms and not infrequently both, differ markedly from each other in their patterns of excretion of porphyrins and porphyrin precursors. Many hundreds of cases of porphyria have been seen in the Bantu of South Africa in recent years and the pattern of excretion in some of these has been determined for comparison with those of the two groups mentioned above.

The patients were seen by doctors in hospitals and clinics in and around Johannesburg, and the provisional diagnosis

of porphyria, based on the observation of characteristic skin lesions, was confirmed by the detection of an excess of porphyrin in the urine. Arrangements were then made for fresh specimens of urine and faeces, passed at about the same time, to be collected and delivered promptly for analysis. The results in 15 adult patients (10 females and 5 males) are recorded in Table I. The means and ranges of these figures are given in Table II for comparison with those from 7 Swedish and 11 White South African patients¹ obtained during remission from acute symptoms.

The methods employed in the analysis were as follows:

Urine. Total porphyrin was determined directly on a suitably diluted specimen by the spectrophotometric method

of Sveinsson, Rimington and Barnes,² and δ -amino-laevulinic acid and porphobilinogen by the method of Mauzerall and Granick.³ Because of the lability of the latter substance all these analyses were commenced within 2 hours of collection, and mostly within 1 hour.

Stools were screened for porphyrin by examining in Wood's light an acetic acid and ether extract of a small fragment; coproporphyrin and protoporphyrin were determined quantitatively as described by Holti *et al.*⁴

TABLE I. PORPHYRINS AND PORPHYRIN PRECURSORS IN URINE AND FAECES FROM BANTU CASES OF PORPHYRIA

Case No. and Sex	Urine			Faeces	
	ALA mg./litre	PBG mg./litre	Porphyrin μ g./100 ml.	Copro. μ g./g. dry wt.	Proto. μ g./g. dry wt.
1 F ..	44	16	2,360	20	11
2 F ..	8	0	1,710	31	11
3 F ..	5	2	1,490	91	25
4 M ..	1	1	98	52	74
5 M ..	2	1	335	37	35
6 M ..	6	2	594	32	53
7 F ..	6	1	392	60	46
8 F ..	4	2	75	23	38
9 F ..	14	11	1,460	29	23
10 F ..	10	2	716	38	19
11 M ..	0	0	560	90	57
12 F ..	47	11	2,220	11	13
13 M ..	3	1	445	89	51
14 F ..	6	1	1,140	screen test normal	
15 F ..	8	1	1,790	50	71

TABLE II. MEAN VALUES AND RANGES OF THE FIGURES RECORDED IN TABLE I COMPARED WITH SIMILAR FINDINGS IN SWEDISH AND WHITE SOUTH AFRICAN PORPHYRICS IN REMISSION

	Urine			Faeces	
	ALA mg./litre	PBG mg./litre	Porphyrin μ g./100 ml.	Copro. μ g./g. dry wt.	Proto. μ g./g. dry wt.
Bantu Mean	11	3.5	1026	47	38
Bantu Range	0.47	0.16	75-2360	11-91	11-74
Swedish Mean	20	23	—	17	24
Swedish Range	4-37	2-42	—	13-26	11-38
White S. African Mean	3.0	1.6	—	393	557
White S. African Range	1.8	0.3	—	54-1220	131-2000

The numbers of observations are small and in several of the groups the distributions are markedly skewed so that the validity of the conventional *t* test is questionable. Professor Kerrich suggested using distribution free methods⁵ to assess the confidence limits of the medians in order to gauge the significance of the differences between the findings in the three populations. The 90 per cent confidence range for each group was obtained by linear interpolation between the pairs of observations at either end of the ranked series which bracketed the upper and lower limits of this range

TABLE III. MEDIAN AND 90 PER CENT CONFIDENCE RANGES DETERMINED BY DISTRIBUTION FREE METHODS ON THE DATA IN TABLE II

	ALA	PBG	Copro.	Proto.
Bantu	6 3.2-9.4	1 1-2	37.5 28-65	36.5 18-54
Swedish	23 5.4-31	29 2-40	15 13-25	25 13-35
White	2 1-5	2 1-2.2	315 95-630	348 160-754

and are given in Table III together with the corresponding medians. The judgments of significance at this level (S) or non-significance (N) of differences between pairs of medians are shown in Table IV.

TABLE IV. ASSESSMENT OF SIGNIFICANCE (S) OR NON-SIGNIFICANCE (N) OF THE DIFFERENCES BETWEEN THE MEDIAN VALUES TAKEN IN PAIRS

	ALA	PBG	Copro.	Proto.
Swedish-White	S	S (?)	S	S
Bantu-Swedish	N	S	S	N
Bantu-White	N	N	S	S

DISCUSSION

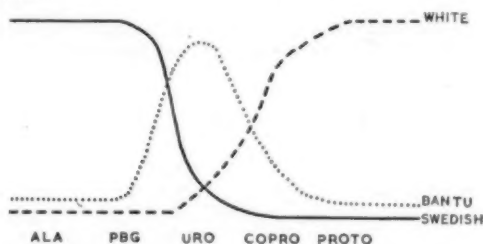
It is known that excretion of δ -amino-laevulinic acid and porphobilinogen increases markedly during acute porphyric episodes both in Swedish and in White South African patients. These attacks are very rare in the Bantu and were not known to have occurred in any of the patients in the present group. In order to avoid the disturbances associated with these episodes the findings during quiescent phases only have been compared.

Inspection of Table II shows that the Swedish and White South African groups differ in that the urinary excretion of precursors is high in the former and virtually normal in the latter, while the converse is true of the faecal excretion of porphyrins. Except for a very slight overlap of the confidence ranges for the median values for porphobilinogen (Table III) the differences between these two are significant at the 5 per cent level. The findings in the Bantu group occupy intermediate positions, differing significantly from the Swedish in excretion of porphobilinogen and faecal coproporphyrin and from the White South African with respect to both fractions of faecal porphyrin.

The urinary porphyrins of the Bantu group (Table II), determined on fresh urine, are all abnormally high as this was the finding used to substantiate the provisional diagnosis of porphyria. Corresponding figures are not available for the other two groups but it has been pointed out elsewhere⁶ that urinary porphyrins in White South African patients during remission from acute attacks, while often slightly increased, may sometimes not be detectable on direct spectroscopic examination, i.e. would be less than about 50 μ g. per 100 ml. None of the urines from the 11 White patients in this group showed a marked excess of porphyrin on spectroscopic examination. It is our common experience that examination of urine is the better test for detection of porphyria in the Bantu and examination of faeces in quiescent White cases. Assessment is more difficult in the Swedish patients since once the urine becomes acid in the renal tubules non-enzymatic transformation of porphobilinogen into uroporphyrin commences and the amount of the latter in the urine when voided has been artifactually increased. None of these urines was regarded as containing a gross excess of porphyrin when screened by Dr. Dean in ultraviolet light. On these grounds it seems justifiable to infer that freshly voided urine from Bantu patients contains more preformed porphyrin than that from the other two groups.

It is visualized that the successive reactions in the biosynthesis of protoporphyrin are catalysed by a series of intracellular enzymes. The findings here presented support the hypothesis that in these three groups of patients the fundamental disturbances which result in the release of the various metabolites from their normal sites to escape

from the cells and become available for excretion occur at different stages of the process. The degree of divergence from normal may be diagrammatically represented as follows:



The suggestion that the primary metabolic error in intermittent acute porphyria lies at the precursor level is not new. It has been put forward by others on the grounds that the uroporphyrin found in the urine of these patients arises from spontaneous transformation of porphobilinogen during the interval between secretion and excretion mentioned above. It is further supported by the finding that faecal porphyrins are virtually normal in this condition. Localization of the error at the later copro-protoporphyrin stage in White porphyrics in South Africa was first discussed by Barnes⁷ and amply confirmed by subsequent studies. The deduction from the findings on the Bantu is put forward tentatively in the hope of confirmation by the discovery of similar cases elsewhere.

The relationship of the porphyria seen in the Bantu to other forms of the disease presents several problems for discussion. This is of an involved nature because of the confusion which exists in current classification and nomenclature.

Latency. The Bantu cases considered in this study all showed active cutaneous eruptions or scars of old lesions which directed the clinician's attention to porphyria. It is quite likely that disturbed porphyrin metabolism may exist in other patients prior to clinical manifestations. These have not been sought by surveys of random urine specimens. Mentz⁸ found varying increases of coproporphyrin only in the urine of the majority of a number of patients with liver disease, but 3 patients, who had no stigmata of porphyria, also showed 290, 880 and 930 μg . of uroporphyrin in 24-hour specimens of urine. For lack of further evidence the question of latent porphyria in these patients was left open.

Duration. Few of the Bantu patients gave reliable information about the duration of their skin lesions, and statements that these had been present for a few months only could not always be accepted. Though a great many cases have been found in the past 10 years, little or nothing can be done for them by way of treatment, so that there is no incentive for patients to maintain contact with the clinic and follow-up studies are difficult. In a few instances in which the same patient has been seen again after an interval of several months or years, some still had active lesions but in others these had ceased though the scars of former eruptions were still evident. Nevertheless, persistence of the metabolic anomaly was confirmed by appropriate tests. The evidence, though slender, is thus that the anomaly in these patients is not a transient disturbance.

Heredity. The great majority of the Bantu patients fall into the middle years of the life span. Our records include only 3 under the age of 20, and 2 of these were under 10 years old. Of the latter two cases, the mother and a sibling of one provided no clinical or laboratory evidence of affection but the father refused to be examined; family studies were not carried out in the other. A few examples of multiple occurrence in a family unit have been found, but these cases were all adults. Eighteen children with a porphyric parent have been examined and no clinical or metabolic evidence of porphyria was detected in any of them. There is thus, as yet, no conclusive indication of a hereditary factor in the aetiology of porphyria in the Bantu, a marked contrast to the convincing evidence of a Mendelian dominant inheritance for susceptibility to acute intermittent porphyria in the Swedish⁹ and variegate porphyria in the White South African⁶ groups. While this gap may be filled in the future the possibility must be maintained for the present that porphyria may be an acquired disease in the Bantu. I have never accepted the suggestion put forward in a recent paper¹⁰ that the name porphyria should be restricted to the genetically conditioned disturbances of porphyrin metabolism and hereby disclaim agreement with it.

Precipitating incident. A mechanism whereby the disturbance may be acquired has already been suggested,⁷ viz. that a liver, weakened in some way by infantile malnutrition, which is common amongst the Bantu, breaks down under stress in adult life and that this form of porphyria is one of its manifestations. For practical purposes all these cases have occurred in urbanized communities, since most of the very few first detected in rural clinics have acknowledged a period of residence in an urban township. Rural Bantu meet their need for alcohol, which is considered to be an important aetiological factor in cutaneous porphyria, with comparatively innocuous home-brewed fermented drinks. On the other hand, the preparation and sale of a variety of adulterated and often toxic concoctions is a major illicit industry in the townships. No statement has been found that kwashiorkor is commoner in urban than in rural areas, but it is well known that infant morbidity is high in large semi-sophisticated urban communities and much of it is ascribed to malnutrition. Severe malnutrition in infancy does not, of itself, provoke disturbances of porphyrin metabolism, for excreta from 10 infants hospitalized for severe malnutrition did not contain excessive amounts of porphyrin. While these observations are purely speculative it is felt that the occurrence of possible predisposing and precipitating factors in a community where porphyria is not uncommon points a way to further studies.

Though the remarkable patient described by Tio¹⁰ does not indicate an actual precipitating incident it provides evidence that erstwhile normal liver cells can acquire a disordered porphyrin metabolism. This elderly woman first showed skin lesions and excreted excessive amounts of porphyrin when she developed a hepatic adenoma, which was found to be richly infiltrated with porphyrin. No evidence of porphyria was found in relations and at her death some years later no fluorescence was observed in the internal organs. It is suggested that a similar deviation of pigment synthesis of diffuse distribution and without the neoplastic tendency might account for the findings in the Bantu.

Hepatic impairment as a modifying factor. Disturbances

of liver function are widespread in the Bantu and excess of urobilinogen, sometimes gross, is seen more frequently in the urine from these patients than in specimens from White cases. Mentz⁸ has shown that increased urinary coproporphyrin in Bantu subjects is related to impairment of liver function. The question then arises, might the porphyria in these two groups be the same condition and the differences in excretion be ascribed to hepatic impairment in the Bantu? On this supposition the urine of the Bantu cases should contain the marked excesses of coproporphyrin and protoporphyrin excreted by the Whites in their stools. This is not supported by the available evidence, since many analyses and recovery experiments have demonstrated that the urinary porphyrin from Bantu patients is predominantly uroporphyrin. Coproporphyrin is often increased but of the numerous paper chromatograms on total recovered porphyrin none has ever suggested the presence of protoporphyrin.

Classification. The name porphyria cutanea tarda has been used in various ways. When it was coined by Waldenstrom¹¹ the statement was made that colics (cause?) occurred in these patients. Watson,¹² in subdividing cases of hepatic porphyria, reserved this name for the cases with cutaneous manifestations only and introduced a mixed or intermediate category for those presenting both acute and cutaneous features. Holti *et al.*,⁴ discussing affected members in the family of an English patient with porphyria cutanea tarda, state, "... in this condition abdominal and neurological manifestations may be the most prominent features, while the skin may be insignificantly affected, or indeed appear quite normal". This is also true of many South African White patients and it is almost certain that many similar patients have been erroneously regarded as cases of intermittent acute or purely cutaneous porphyria, according to the predominating symptom complex.

Rimington¹³ and his associates have frequently stressed the importance of high faecal porphyrins as a diagnostic feature of porphyria cutanea tarda. On this basis the Bantu cannot be included in this group, since stool porphyrins are relatively slightly increased and, indeed, are sometimes within normal limits. The White patients, on the other hand, conform to this requirement, but many are entirely free from cutaneous manifestations, while on the other hand these have been observed in several young children in affected White families in addition to the case reported by Barnes *et al.*,¹⁴ in whom they began at 6 months of age and have persisted ever since.

The present situation points to the necessity for distinguishing two groups of cutaneous porphyria in addition to the erythropoietic (congenital) form. This is discussed at some length by Tio,¹⁵ who culled many cases from the literature and pointed out that the mixed cases (with cutaneous and acute features) tended to commence earlier in adult life and to give family histories more frequently than purely cutaneous cases, who began later in life and were more often solitary. The latter he designated as porphyria cutanea tarda SS (*sensu strictiori*). Waldenstrom¹¹ has recently proposed hereditary and symptomatic sub-groups of porphyria cutanea tarda.

Mixed porphyria in Watson's sense has not been encountered in Bantu patients; very few have presented with acute manifestations and none of these has had conspicuous

skin lesions (Woods and Barnes¹⁶). None has been available recently for full metabolic study. In one acute case elective appendectomy was performed and he recovered completely despite an exacerbation of acute symptoms during convalescence. In several large hospitals in this vicinity, no other instance is known of acute porphyria following surgery or medical treatment in a Bantu. Cutaneous porphyria in the Bantu might, therefore, be equated with Tio's porphyria cutanea tarda SS or Waldenstrom's symptomatic sub-group. Against the former, however, is the fact that many cases have occurred as early as the third decade of life, while the admittedly slender evidence already presented that the condition is not transient is rather against the latter.

Metabolic studies along the lines indicated herein will help to overcome some of the difficulties of classification and more thorough family studies are clearly important.

It is noteworthy that the Bantu cases, who on metabolic findings seem to lie between the Swedish and White South Africans, on the basis of clinical manifestations would be placed at the opposite extreme to the Swedish with the White South African group intermediate. This leads to the inference that Watson's hypothesis that the clinical findings in hepatic porphyria are varied manifestations of a single underlying metabolic anomaly, though true of the White South African patients, cannot be extended to cover all three of these groups.

It has been observed that skin sensitivity to solar radiation in humans¹⁷ and to ultraviolet light in albino rats¹⁸ is enhanced after administration of δ -amino-laevulic acid. Cutaneous reactions in the patients under discussion cannot be harmonized with this finding, since the Swedish patients, who would presumably have the highest concentrations of this metabolite in the circulating blood, have no skin lesions such as are present in many patients in the other two groups.

SUMMARY

The excretion of porphyrins and porphyrin precursors by 15 adult Bantu patients with a cutaneous type of porphyria is reported and shown to differ from corresponding findings in patients with intermittent acute and variegate forms of porphyria.

The implications of this observation in relation to the aetiology and classification of the porphyria in Bantu patients are discussed.

Prof. J. E. Kerrich, Department of Statistics, University of the Witwatersrand, advised on the statistical procedure. The specimens from patients with infantile malnutrition were sent by Dr. E. Kahn, Baragwanath Hospital; access to the adult patients was afforded by Dr. J. W. Scott Millar, Medical Officer of Health, Johannesburg and his staff, Dr. M. Rose, Baragwanath Hospital, and Dr. S. Grieve, Coronation Hospital. The Director of the Institute granted facilities for the laboratory work entailed.

REFERENCES

1. Dean, G. and Barnes, H. D. (1959): S. Afr. Med. J., 33, 246.
2. Sveinsson, S. L., Rimington, C. and Barnes, H. D. (1949): Scand. J. Clin. Lab. Invest., 1, 2.
3. Mauzerall, D. and Granick, S. (1956): J. Biol. Chem., 219, 435.
4. Holti, G., Rimington, C., Tate, B. C. and Thomas, G. (1958): Quart. J. Med., 27, 1.
5. Mood, A. McF. (1950): *Introduction to the Theory of Statistics*. New York: McGraw-Hill.
6. Dean, G. and Barnes, H. D. (1955): Brit. Med. J., 2, 89.
7. Barnes, H. D. (1956): Ph.D. thesis, University of London.
8. Mentz, H. E. A. (1958): D.Sc. thesis, University of Pretoria.
9. Waldenstrom, J. (1957): Amer. J. Med., 22, 758.
10. Tio, T. H., Leijnse, B., Jarrett, A. and Rimington, C. (1957): Clin. Sci. 16, 517.
11. Waldenstrom, J. (1937): Acta med. scand., suppl. 82.

12. Schmid, R., Schwartz, S. and Watson, C. J. (1954): Arch. Intern. Med., 93, 167.
 13. Rimington, C. (1952): Résumés du II^e Congrès Internat. de Biochimie Paris, p. 18.
 14. Barnes, H. D., Frootko, J. and Parnell, J. L. (1957): S. Afr. Med. J., 31, 342.
 15. Tio, T. H. (1956): M.D. Thesis, University of Amsterdam.
 16. Woods, J. D. and Barnes, H. D. (1951): S. Afr. Med. J., 25, 952.
 17. Berlin, N. L., Neuberger, A. and Scott, J. J. (1956): Biochem. J., 64, 80.
 18. Jarrett, A., Rimington, C. and Willoughby, D. A. (1956): Lancet, 1, 125.
 19. Dean, G. and Barnes, H. D. (1958): Brit. Med. J., 1, 298.

ONOMKEERBARE KONSTRIKSIERING VAN DIE UTERUS TYDENS BARING

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'n Konstrikasie kan gedefinieer word as 'n gelokaliseerde ring van kontraksie en hipertonus van die miometrium wat in enige stadium van die baring kan voorkom en wat die uitstoot van die produkte van swangerskap verhoed.¹ Nie-teenstaande duidelike uiteensettings deur verskeie skrywers in die verlede^{2,3} heers daar nog baie verwarring oor hierdie onderwerp. Twee soorte konstrikasie word beskrywe in baring.²

1. 'n Spasmodiese, omkeerbare konstrikasie wat verslap onder die invloed van narkose, insnyding, morfien, rus, adrenalien, of na die dood.

2. 'n Permanente, onomkeerbare konstrikasie wat nie verslap onder narkose of ander middels nie, selfs nie na die dood ingetree het nie.

Die omkeerbare konstrikasie word redelik dikwels in die verloskunde teëgekomp en dit is 'n erkende entiteit. Baie min outentieke gevalle van die onomkeerbare tipes word egter in die literatuur gevind. Al sulke gevalle behoort gepubliseer te word om ons in staat te stel om die ware voorkoms van die toestand te kan vasstel en die geval wat hier aangehaal word regverdig dus publikasie.

VERSLAG VAN DIE GEVAL

'n 36-jarige Naturelle vrou is op 4 Oktober 1956 om 8.15 vm. toegelaat tot die Naturelle-kraamafdeling van die Algemene Hospitaal, Pretoria. Sy is met 'n ambulans na die hospitaal gebring vanaf 'n afgeleë distrik en slegs 'n baie swak geskiedenis kon verkry word.

Geskiedenis

Die pasiënt was 'n para 7, maar geen besonderhede kon verkry word van die vorige of die huidige swangerskappe nie. Al wat bepaal kon word was dat die pasiënt reeds 2 dae in kraam was. Die fetale hart was waargeneem 6 uur voor opname, maar het daarna verdwyn.

Ondersoek

Die pasiënt was in 'n baie swak algemene toestand. Sy was koud en het gesweet. Die pols was nie voelbaar nie en die bloeddruk kon nie bepaal word nie. Asemhaling was vinnig en oppervlakkig. Die buik het die grootte van 'n voltydse swangerskap gehad. Die uterus was hard saamgetrek, het hoog opgestyg in die buik en daar was geen verslapping nie. Die laer segment was teer en die kop was gefikseer. Die posisie van die skedel was beskou as regter oksipito-posterior. Geen fetale hart was hoorbaar nie.

Met rektale ondersoek was die voorliggende deel stand 0, en geen cervix kon gevoel word nie. Die vulva was baie edemateus, en 'n bloederige vaginale afskeiding was teenwoordig.

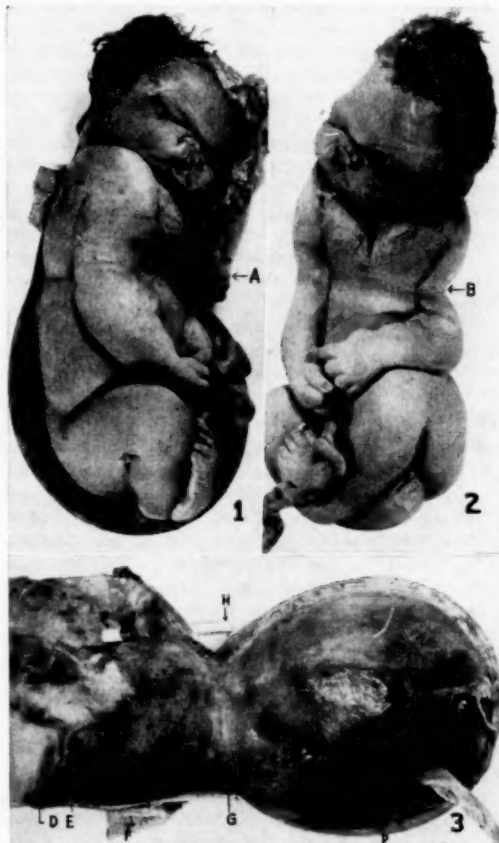
'n Voorlopige diagnose van uterusruptuur is gemaak en daar is dadelik begin met pogings tot resussitasie, maar die pasiënt is 30 minute na opname oorlede.

Post-mortem-ondersoek

Die lykskouing is uitgevoer op 5 Oktober 1956. 'n Algemene peritonitis was teenwoordig en omtrent 200 c.c. groen-eterige vloeistof is in die peritoneale holte gevind. Die hart, longe, spysverteringskanaal, en organe, asook die niere, was normaal, maar die ureters was uitgeset.

Die uterus het 'n voltrae fetus bevat waarvan die kop gedeeltelik

in die vagina was. Daar was 'n klein skeur teenwoordig in die linkerkant van die vaginale wand. Geen ruptuur van die uterus is waargeneem by uitwendige ondersoek nie. Die uterus met die fetus is *in toto* verwyder en ondersoek van die monster het gewys dat die uterus baie styf om die fetus saamgetrek was. 'n Sagittale seksie van die uterus het bevestig dat die uterus baie styf om die fetus was (Afb. 1). 'n Opvallende konstrikasie by die aansluiting van die laer en hoër segmente, wat die fetus rondom die



Afb. 1. Oopgesnyde uterus (met fetus gesien van kant). A. Konstrikasie om fetus. B. Ring om fetus.
 Afb. 2. Konstrikasie om fetus (gesien van kant). G. Konstrikasie.
 D. Vagina. E. Cervix. F. Blaas. P. Placenta en H. Perforasie.

borskas omknel het, was sigbaar en 'n baie duidelike induiking is rondom op die kind gelaat (Afb. 2 en 3). Die kind het 10 lb. 3 onse geweg en die skedel, wat in die bekken ingekerker was, was vervorm met 'n groot kaput.

Die cervix was vol ontsluit met 'n dun uitgerekte laer segment. Die plasenta was anterior geïmplanteer. Daar was 'n opening

omtrek 3 cm. in deursnit tussen die vagina en die sak van Douglas (Afb. 3). Hierdie opening was net distaal van die rand van die cervix. Die opening was goed afgerond met skerp rande en het die voorkoms gehad van 'n druknekrose en nie van 'n skeur nie.

Patologiese Diagnose

Die pasiënt het 'n obstruktiwe baring met 'n konstriksiering gehad. 'n Perforasie was teenwoordig tussen die vagina en die sak van Douglas as gevolg van druknekrose wat aanleiding gegee het tot 'n algemene peritonitis.

BESPREKING EN OPSOMMING

Post-mortem-ondersoek van hierdie geval het die teenwoordigheid gewys van 'n opvallende konstriksiering, in die gebied tussen die hoër en die laer segmente. Hierdie ring het die fetus so styf omknel dat 'n duidelike induiking om die fetus gelaat is. Tot hoe 'n mate die konstriksiering die oorsaak of die gevolg van die obstruktiwe baring was kon nie met sekerheid bepaal word nie.

Die perforasie wat aanleiding gegee het tot 'n peritonitis het die voorkoms gehad van 'n druknekrose. Rudolf² beweer dat die uterus nie sal perforer met 'n konstriksiering nie, tensy dit gekompliseer word deur een of ander faktor wat druknekrose van die uterus veroorsaak.

By hierdie geval was daar dus 'n konstriksiering teenwoordig wat bly voortbestaan het na die dood van die pasiënt. Dit bewys dus beslis dat 'n onomkeerbare konstriksiering mag voorkom.

Graag bedank ons prof. F. G. Geldenhuys vir sy advies.

VERWYSINGS

1. Jeffcoate, T. N. A. in Holland, F. en Bourne, A. (1955): *British Obstetric and Gynaecological Practice*, 1ste druk, p. 552. Londen: Heinemann.
2. Rudolph, L. (1935): J. Obstet. Gynaec. Brit. Emp., 42, 993.
3. Louw, J. T. (1948): S. Afr. T. Geneesk., 22, 366.

OPEN PANEL OR CLOSED PANEL? *

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For the third time I am about to vacate the chair of local medical politics—twice when we were a Division and now when we are a Branch. I feel, therefore, I can speak with a certain amount of authority on medical politics; but I would stress at the outset that I speak purely from the general practitioners' point of view and not that of the specialists.

Throughout the years certain slogans and policies have been dinned into us, with the hope, I imagine, that continued repetition will eventually make us feel that they are right and everything contrary is wrong. I refer to such catch phrases as 'free choice of doctor', 'doctor-patient relationship', 'open panels in preference to closed', 'medical aid society in preference to medical benefit society', etc. Such things as these are supposed to make up our bible; and I shall try to analyse some of them.

I think we all agree that the medical aid system is the one we prefer. Most of us prefer it to private practice, where the fees are medical aid plus 50% and the bad debts are up to 33%, leaving a nett amount the same as in medical aid practice but with far more book-keeping. Then again the medical aid member uses his doctor more than the private patient because he feels he can afford it. I feel that I am on safe ground if I say that the vote in favour of medical aid practice would be unanimous if we had to choose between private practice, medical aid practice and benefit society practice. However, it is not as easy as all that. What has happened when new medical aid societies have been started? The new society has submitted its constitution to the Medical Association and immediately we have sought reasons for turning down the project. We object to this and that, such as the non-limitation of the higher income group, too much income being spent on administration, the possibility of someone getting a profit out of the society, etc. These are but a few of the objections that have been raised in the past and they are only put up as examples.

In private practice, is it our custom to charge higher fees than the normal to the upper income group? I say it is not; we charge the same fee for visiting the managing director of a firm as we do his typist. And surely this is fair enough—the managing director buys his groceries at the same price as his typist; why

shouldn't he buy his medical attention at the same rate? Then why do we try to exclude the higher income group from membership? We reply that we are giving a reduced rate and that the higher group is not entitled to it. Let us be honest and admit we love this so-called reduced fee, even if it comes from the upper income group, provided it is 100% guaranteed.

Surely the cost of administration of a society, or for that matter any other costs it may incur, is its own business. It would seem that the Association wants to tell these societies what they must do or may not do with their own money. We tell them we are entitled to do this because we are giving them reduced fees; but in our heart of hearts we have to admit that we love these so-called reduced fees.

I suggest that we stop interfering in the business of medical aid societies and forget our 'high-falutin' ideas about the upper income group. Instead of this, I suggest that provided we get a fair deal—and in my opinion we do—we welcome them with open arms.

What happens when a society or group of persons say that they cannot afford to form a medical aid society? Then our Association replies that its members are prepared to be magnanimous and accept a still further reduction in fees and allow the formation of a medical benefit society. However, again, they must conform to our requirements, and one of the first limitations is an upper income scale which is either in the pauper class or near-pauper. In any case, there are few White persons in the country who qualify for membership of a medical benefit scheme according to the requirements of our Association. So the Association promises assistance to the lower income group and in the same breath makes the income limitation so low that hardly any one qualifies. The public are not fools; they see through these gestures and the reputation of the profession suffers.

However, supposing they overcome the last obstacle and form a medical benefit society, then our Association requires that there must be an open panel. Why do they require an open panel? Because it is in the best interest of the public, etc. It gives free choice of doctor and maintains the 'doctor-patient relationship' amongst many other things. This conforms to the policy of our Federal Council, whose last resolution on the subject, taken in April 1958, is as follows:

'That the policy of this Association in regard to the open panel system shall be to ensure a free choice of doctor by the patient and of the patient by the doctor. In pursuance of this policy, all future appointments to benefit societies and other bodies should be made on the basis of open panels for general practitioners and specialists. Recognizing that there may be practical difficulties in the implementation of this policy exceptions may be made with the approval of Federal Council or its Executive Committee.'

Did it occur to Federal Council what a contradictory statement



Dr. Adderley

* Valedictory Presidential Address, Vereeniging, 30 January 1959.

this is? For example, if Mrs. X wants Dr. Y she has the right to him, but that right is immediately taken away when Dr. Y refuses to treat Mrs. X. One wonders sometimes whether it is really the interests of the public we have at heart or our own.

One of the objections to open panels is the increased cost of administration; yet we object if a large proportion of a medical society's subscriptions go towards administration. Experiences in the industrial area of this Branch, with its many industries, is that not more than 5% of the public really wish for free choice of doctor. Since the war there has been a regular 20% turnover of personnel in industry per annum, which runs into many thousands, and the vast majority of this moving population are only interested in getting medical treatment most cheaply and efficiently. They are not interested in who administers the treatment as long as it is provided. With regard to the small minority who want their own doctor, experience shows that they retain him when they change their job—until they receive his first account. Then, when they realize that they are paying twice for their medical attention, they fall in and settle down comfortably and happily under their new panel doctor. So much for free choice of doctor and the doctor-patient relationship. The latter has disappeared in England under social medicine, and here, too, it is impossible because of the large moving population. Incidentally, reports have it that in England the public are only too happy under socialized medicine and it is the doctors who are unhappy. We should then refrain from telling the public that our open panel policy is in their own interests.

Other objections that are made to the closed panel are that the doctors become subservient to the management and its committees, and that the management uses the doctors to discipline its employees by more strict certification, etc. If the doctors allow themselves to be subservient it is their own fault; experience shows that any management of repute treats its medical staff very well and usually acts on their advice. In fact the medical personnel are probably better treated than some other professions, e.g. engineering and accountancy.

Is there any objection to a certain amount of discipline, whether it be self-discipline or just discipline of others? I say that in moderation it is a good thing in any walk of life. We all know the malingerers and the members of societies who take advantage. They use us to stay off work unnecessarily and in some cases to obtain weekly prescriptions from the doctors which are more like grocery lists.

An argument in favour of the open panel is the fact that the management and lay committees have little control over the doctors, who therefore retain their independence. But what happens in fact? The doctors are in competition and find that instead of having to kowtow to the management they have to kowtow to all and sundry. If they don't acquiesce in the patient's demands he changes his panel doctor. To avoid this the doctor is tempted to issue certificates against his better judgment and to make the weekly shopping prescriptions longer and longer. From this point of view I ask you which is the most degrading system, so

far as the profession is concerned, the open panel or the closed? From my point of view there is nothing more degrading than being told how I should treat my patients, when I should issue a certificate and what drugs and medicine I must prescribe. The same argument applies to a certain extent to medical aid practice.

Many open panels allow extra fees for operation, etc. whereas the average closed panel includes this in the capitation fee. The former system is a financial inducement to the general practitioner to undertake major surgery.

The temptation, then, under the open panel system, is to prostitute ourselves, to allow the public to blackmail us into wrong certification, etc. and to look for operative work. As against that, the closed panel doctor has no inducement but to practice medicine as his conscience dictates, which is much nearer the Hippocratic oath.

I feel that our Association has adopted too narrow an attitude towards medical schemes; we have regarded them with suspicion and I cannot help feeling that in some cases we do not give the public a fair deal. I should like to relate an experience I had several years ago: I attended a meeting between members of the executive of a medical benefit fund and three senior delegates from a Branch of our Association. One of the delegates opened the meeting by informing the chairman of the society that medical officers had been unethical in accepting full-time appointments and that they could be expelled from the Association; and that the society might find itself without any doctors. The chairman interjected at this stage and informed the delegates that he was not prepared to be threatened and if that was their attitude he was not prepared to negotiate further. Oblivious of the chairman's attitude the delegates proceeded to read the views of the World Medical Association on free choice of doctors and the doctor-patient relationship, etc. Their remarks were emphasized by vivid gesticulations and much waving of index fingers. However, the chairman of the society, who was a highly intelligent executive, listened in silence and when the delegates had, at last, finished, he very politely closed the meeting. From that day to this we have never been able to get any further with this particular society and in fact have only met with aggression and antagonism from them. Incidentally, it is of interest to note that the members of this society are very happy and in fact all sorts of outside members of the public are clamouring to be allowed to join, the doctors are happy, and the only unhappy people are the members of our Association who reside elsewhere and know nothing about local conditions. Furthermore, in spite of our continued blackballing of their advertisements through the years they have never had any difficulty in obtaining medical officers.

I feel that in the past we have tried to force something on the public which they do not want, our arguments have been too theoretical, and we have been constantly looking for ulterior motives where none exist. I appeal to the future executives of this Branch to adopt a broader outlook, to give the public what they want and not what we want, and to treat lay medical societies with courtesy and cooperation and not with suspicion.

HOSPITAL FOR THE TREATMENT OF ALCOHOLISM : HOSPITAAL VIR DIE BEHANDELING VAN DRANKSUGTIGHEID

The new Cape Provincial Hospital for the treatment of alcoholism, the Park Road Hospital, was officially opened by Dr. J. H. O. du Plessis, the Administrator of the Cape Province, at 3.15 p.m. on 17 March 1959. The hospital is the first of its kind in South Africa to be run by a provincial administration.

Control of the hospital will come under the Department of Neurology and Psychiatry of Groote Schuur Hospital, Observatory, Cape. A special advisory committee representing various bodies and organizations will, however, form a link between the hospital and the Department of Neurology and Psychiatry, on the one hand, and the community, on the other hand. The advisory committee will consist of 12 members. Of these the names of 8 were announced by the Administrator in his opening address: Mr. W. J. B. Slater, Secretary, Cape Provincial Administration (chairman); Mr. G. Albertyn, Chief Welfare Officer of the Department of Social Welfare; Mr. G. S. Frank, regional magistrate; Mr. H. T. East; Dr. W. Marais; Dr. K. W. Heese, clergyman of the Dutch Reformed Church at Pinelands; the Rev. A. J. T. Wood, of the Methodist Church, Wynberg and Dr. I. F. A. de Villiers.

Die nuwe Kaapse Provinsiale Hospitaal, die Parkweg-Hospitaal, is amptelik geopen deur dr. J. H. O. du Plessis, Administrateur van Kaapland, om 3.15 nm. op 17 Maart 1959. Die hospitaal is die eerste in sy soort in Suid-Afrika wat deur 'n provinsiale owerheid geadmistreer word.

Die hospitaal sal beheer word deur die Departement Neurologie en Psigiatrie van die Groote Schuur-Hospitaal, Observatory, Kaap. 'n Spesiale adviserende komitee wat verskeie liggame en organisasies verteenwoordig sal eger as skakel dien tussen die hospitaal en die Departement Neurologie en Psigiatrie, aan die een kant, en die gemeenskap aan die ander kant. Die adviserende komitee sal uit 12 lede bestaan. In sy openingsrede het die Administrateur die name van 8 lede bekend gemaak: As Voorsitter sal optree mnr. W. J. B. Slater, Sekretaris van die Kaapse Provinsiale Administrasie. Die ander lede is soos volg: mnr. G. Albertyn, hoofwelsynsbeampte van die Departement Volks-welsyn; mnr. G. S. Frank, streeksmagistraat; mnr. H. T. East; dr. W. Marais, dr. K. W. Heese, predikant, N.G. Kerk, Pinelands; cerw. A. J. T. Wood van die Metodistekerk, Wynberg; en dr. I. F. A. de Villiers.

In his address the Administrator said that this venture was an act of faith motivated by the realization of the urgent need for help for the victims of the ravaging disease, alcoholism. He said that an attempt would be made to make available to patients the best services that modern medicine and the community could offer. He also gave the assurance that if it were a success, the scheme would be extended for non-European people. The new hospital will be an experimental hospital and the attitude of the public will be crucial in determining the success of the venture. The primary aim of the undertaking is to try to help those who really want to help themselves.

There are 24 beds for men and 6 for women. Patients will be admitted for relatively short periods only and treatment will then be continued on an out-patient basis. Intensive psychotherapy and group therapy will supplement other forms of treatment given in the hospital. The hospital is situated in pleasant surroundings not far from Groote Schuur Hospital and is easily accessible. It has been furnished with imaginative forethought and an atmosphere of colourful warmth and homeliness has been created.

In sy rede het die Administrateur daarop gewys dat hierdie onderneming 'n geloofsaad is wat voortgespruit het uit die besef van die dringende behoefte aan hulp vir die slagoffers van die verwoestende siekte, dranksugtigheid. Hy het gesê dat daar getrag sou word om die beste dienste wat die moderne geneeskunde en die gemeenskap self kan aanbied, beskikbaar te stel. Hy het ook die versekering gegee dat indien die skema 'n sukses blyk te wees, dit uitgebrei sou word vir die nie-Blanke persone. Die nuwe hospitaal sal 'n eksperimentele hospitaal wees en die gesindheid van die publiek sal deurslaggewend wees om die welslae van die onderneming te bepaal. Die grondliggende doelstelling van die onderneming is om diegene te help wat werklik hulself wil help.

Daar sal in die hospitaal 24 beddens vir mans wees en 6 vir vroue. Patiënte sal slegs vir betreklike kort tydperke toegelaat word en daarna sal die behandeling voortgesit word op 'n stelsel van dienste vir buitepatiënte. Intensiewe psigoterapie en groeps-terapie sal ander behandelingsmetodes wat in die hospitaal gegee word, aanvul. Die hospitaal is in 'n aangename omgewing geleë, nie ver van die Groote Schuur-Hospitaal nie, en maklik bereikbaar. Dit is met verbeelding en bedagsaamheid gemeubileer en 'n atmosfeer van kleurrike warmte en huislikheid is geskep.

IN MEMORIAM

JOHANNES CHRISTIAAN RABIE, M.B., Ch.B. (EDIN.)

Dr. Rabie is op 24 Februarie op sy 61ste verjaardag in sy huis in Port Elizabeth oorlede. Dr. Rabie is in die distrik Robertson gebore. Sy skoolopleiding het hy aan die Hoër Jongenskool in die Paarl gehad. Daarna is hy na die Suid-Afrikaanse Kollege in Kaapstad en later na die Universiteit van Edinburgh in Skotland, waar hy die grade M.B., Ch.B., behaal het.

In 1921 het hy hom as geneesheer op Oudtshoorn gevestig. Daar het hy aktief deelgeneem aan die openbare aangeleenthede en was onder meer 8 jaar lank stadsraadslid. Hy was ook lid van die afdelingsraad en etlike jare voorsitter daarvan.

Dr. Rabie is op Oudtshoorn met mej. Johanna Hooper van daardie distrik, getroud. Uit die huwelik is twee seuns gebore wat vandag albei geneesheer is. In 1931 het hy na Port Elizabeth verhuis. Hy het altyd aktief belanggestel in politieke bedrywighede en is in 1956 tot Senator benoem. Sy belangstelling was wyd en het gestrek oor mediese, politieke, kulturele en kerklike gebiede. Hy was lank sekretaris en tot met sy dood lid van die kultuurraad, voorsitter van die volksfeestekomitee, lid van verskeie Afrikaanse skoolkomitees, lid van die Sentrale Van Riebeeckfeestekomitee, voorsitter van die Sharley Cribb-Verpleegsterskollege se bestuur, voorsitter van die spoorwegdoktersgroep van die Kaap-Middellande en lid van die uitvoerende komitee van die groep geneesheer in die Unie en Suidwes-Afrika.



Dr. Rabie

Daarbenewens was hy ook voorsitter van die Algemene Praktisynsgroep van die Kaap-Middellande, lid van die Uniale uitvoerende komitee daarvan, lid van die bestuur van die Mediese Vereniging van Kaap-Middellande, lid van die mediese adviserende komitee van die Provinsiale Hospitaal en die Walton-Ortopediese Hospitaal in Port Elizabeth en lid van die mediese adviserende komitee van die Livingstone-Hospitaal.

DAVID EISENBERG, M.B., B.Ch. (RAND)

Dr. Ronald Singer, of Cape Town, writes: Dr. David Eisenberg passed away on 10 February 1959 after a long and painful illness shortly before his 30th birthday.

He was born in Johannesburg and matriculated at Athlone High School. He studied Art and later Medicine at the University of the Witwatersrand, where he graduated in 1953.

He proceeded to London in 1955 to prepare for his Primary Fellowship examination and there contracted his fatal illness.

Well prepared for his career and equipped with deep understanding of human nature and profound humility, he was on the brink of an outstanding career when stricken down.

He was a source of hope, inspiration and encouragement to colleagues, friends and family. Those who came to sympathize during his illness went away refreshed and uplifted by his indomitable spirit and his vigorous defence of human rights and principles.

He had so much to give but was denied the opportunity of giving by being cut off at such a young age.



Dr. Eisenberg

MENTAL HEALTH IN BRITAIN*

The humane and liberal purposes of the Mental Health Bill at present before the British Parliament is a piece of legislation that has been long in the making. The nation has long had it on its conscience that the law covering mental illness and mental

deficiency has been confusing, at times illogical, and occasionally unjust. It must be remembered however, that the pace of medical research and of advances in medical treatment naturally outstrips the normal possibilities of legislation.

Where a century or less ago it seemed sound enough to keep

* Extract from a Westminster commentary by Ernest Atkinson.

a mentally sick person out of the community at large for all of his life, and to do that with the backing of the law, now the community and the law must, in all humanity and thoughts for the rights of man, take every conceivable account of the possibilities of cure of the mentally sick person and his restoration to the company of his fellows. The complex of legislation now under revision goes back almost 70 years, through Mental Deficiency Acts passed between 1913 and 1938 to Acts beginning as long ago as 1890. The main principles of the present Bill can be summarized as follows: (1) As much treatment as possible, whether in hospital or outside, should be given on an informal and voluntary (that is, a consenting) basis, and (2) that in the cases where compulsion is necessary, whether in the interests of society or of the patients, there shall be safeguards for the liberty of the subject and the protection of the public.

From these two principles and from a generous review of the existing law, the rest of the provisions of this Bill flow. It is based almost entirely on the recommendations of a Royal Commission which sat recently, departing markedly from them only over classifying the types of mental sufferers who are to be placed under restraint. Here we are in an area where definitions are difficult—particularly definitions that will satisfy the present-day conscience.

The Bill would apply compulsory detention to persons in four groups: the mentally ill; the severely sub-normal; the sub-normal; and the psychopathic. Those in the latter two groups would be put in hospital compulsorily if under 21 years old, but over that age only after a conviction in court or a transfer from prison. The purpose here is to give authority to hold, for observation and treatment, the psychopathic potential child murderer, or

other possibly dangerous criminal, before he can begin to do harm.

But all that, important though it is from the individual and the medical and the criminal law points of view, is of course only a part of the whole conception of the Bill, which is to bring the treatment of mental ill-health fully into the scope of the National Health Service. The dread of the mentally sick person and of his relatives hitherto has been that he may be 'certified'—a thing by modern standards far too easy to do—and that thereafter the process of removing the 'certification', when the person is cured, or at any rate becomes fit enough to resume some unconfined place in society, may be far too difficult. 'Certification' will now disappear, and with it the automatic shutting away of those thus deemed disordered.

What is substituted is a broad and generous scheme which enlarges and clarifies the duty of local health authorities, to take special care of the mentally handicapped. They need not be in hospitals and are often better off at home; but they need care. It improves the provision for children judged incapable of being educated even in schools for the backward. It abolishes the old power of 'certification', which could be arbitrary, and says that two doctors, one of them a psychiatrist, are needed to sign a document compelling a person to take treatment. The aim of the Bill is to make the care and treatment of the mentally ill or handicapped as easy, informal and free as for any other kind of sick or handicapped people. And in that humane purpose the Bill, though details may be criticized, is sure of the support of people of goodwill on all sides of the House of Commons, and outside it.

ERE-PENNINGMEESTER SE SPESIALE FONDS : HONORARY TREASURER'S SPECIAL FUND

Met hartlike dank word die volgende skenkings gedurende Januarie en Februarie 1959, erken:

The following donations during the months of January and February are gratefully acknowledged:

	£	s.	d.
Voorheen erken/Previously acknowledged	1,163	14	0
Dr. R. Lipschitz, Kenilworth, Cape	3	3	0
Dr. M. G. Woolf, Port Elizabeth	1	1	0
Dr. A. W. S. Sichel, Cape Town (2nd)	1	1	0
Dr. P. H. Kamfrath, Thaba 'Nchu	5	5	0
Mr. C. Kaplan, F.R.C.S., Durban	5	5	0
Dr. C. L. Grobler, Robertson	3	3	0
Dr. B. P. de Jongh, Vredenburg	2	10	0
Dr. G. F. C. Troskie, Kroonstad	5	5	0
Dr. M. J. Uys, Harrismith	2	0	0
Dr. J. S. van der Poel, Kroonstad	5	5	0
Dr. G. J. Budow, Goodwood	3	3	0
Dr. P. C. Marshall, Transkei	2	2	0
Dr. J. H. Malherbe, Potchefstroom	2	2	0
Dr. F. Reinhold, Johannesburg	3	3	0
Dr. L. E. Gellman, Port Elizabeth	3	3	0
Dr. J. A. Currie, Rondebosch	1	4	3
Dr. T. J. Dry, Cape Town	2	2	0

	£	s.	d.
Dr. M. E. Massing, Kroonstad	2	0	0
Drs. H. R. van Huyssteen en F. Hagen, Harrismith	2	0	0
Dr. T. W. Mare, Worcester	2	2	0
Dr. D. J. J. Ackermann, Johannesburg	2	2	0
Dr. E. E. Neser, Klerksdorp	5	0	0
Dr. I. Freinkel, Viljoenskroon	3	3	0
Dr. C. Trey, Port Elizabeth	2	2	0
Dr. W. C. J. Cooper, Lovedale	1	0	0
Prof. L. J. te Groen, Pretoria	1	5	0
Dr. L. Cilliers, Despatch	1	1	0
Dr. B. P. Friedland, Brits	5	5	0
Dr. M. Capcan, Kroonstad	2	2	0
Dr. J. S. Loubser, Kroonstad	5	5	0
Dr. L. Krogh, Usakos (2nd)	1	1	0
Dr. H. H. Broodryk, Vryheid	3	3	0
Dr. S. Stein, Cape Town	3	3	0
Dr. R. L. van Wizen, Kroonstad	2	2	0
Dr. W. A. Dodds, Johannesburg	5	0	0

Totaal soos op 28 Februarie 1959 .. £1,258 7 3
Total as at 28 February 1959

THE BENEVOLENT FUND : DIE LIEFDADIGHEIDSFONDS

The following donations during February 1959 are gratefully acknowledged:

Met dank word die volgende skenkings gedurende die maand Februarie erken:

Votive Cards in Memory of:

Dr. A. Hay-Michel by Dr. R. Schaffer; Dr. C. T. Moller by Dr. J. J. van Niekerk, Dr. D. E. Mackenzie, Dr. W. Ross, Dr. L. Bernard, Dr. H. van Heerden, Dr. E. Zeiss, Dr. C. F. Marne-wecke, Dr. C. M. Meyer, Dr. E. Parker, Dr. J. P. Smith, Dr. G. Brammer, Dr. J. Moller, Dr. I. Goldblatt, Dr. R. Warren and Dr. A. Jankowitz.

Total Received from Votive Cards £27 0s. 0d.

Services Rendered to: Dienste Gelewer aan:

Dr. Margaret Hill by Prof. F. du T. van Zyl.
Dr. L. Cilliers en vrou deur Drs. D. T. Dodds, W. J. de Wet, M. Towers, T. B. Forrest, W. E. Owens en Tony Ward.
Dr. A. J. Orenstein by Dr. M. Weinbren.
Mrs. I. Norwich by Drs. P. I. Peltz and H. Neifeld.
Keith and Christopher Anderson by Drs. L. E. Lane and Isobel G. Smith.
Dr. F. J. Küper by Dr. E. van der Burg.
Dr. B. G. Francis by Dr. P. Hafner, Mr. L. Mirkin and Dr. T. McChesney.
Mrs. Lowenstein by Dr. J. C. F. Grant.
Robin Lowenstein by Dr. S. Spiro.

Total Received for Services Rendered £68 7s. 0d.

Donations:

Drs. B. A. Armitage, B. Singer, R. D. van Rooyen, D. S. McCall, H. P. G. Militz, L. Lappin, H. Levin, H. H. Stormmanns, J. K. McCabe, M. Ginsburg, J. H. Jackson, O. A. S. Marais, D. J. Pudifin, P. V. McGarry, N. Mundy, C. D. Scott, A. Jowell, P. S. Grove, A. G. Cheyne, H. H. Bloch, C. F. Scheepers, H. C. Warner, I. Freedman, J. Jacobson, J. Walker, J. D. Harle, F. S. Drewe, H. Saacks, M. A. Lloyd, H. Simon, B. Navid, B. P. Friedland, L. R. Tibbit, R. J. D. Jamieson, S. H. Cohen, H. H. Broodryk, L. Tomory, S. Stein, C. L. Lauf, R. J. Marott, C. J. Koster, A. van Rooy.

Total	£ 29 15 9
Bequest from the late Dr. A. E. Pinniger	200 0 0
Members of Natal Coastal Branch: Proceeds Cake Sale	35 0 0
Donations—Special Appeal	176 14 0
Profit Supper Dance November 1958	319 5 2
Total Donations	£760 14 11

Grand Total £856 1s. 11d.

PASSING EVENTS : IN DIE VERBYGAAN

Dr. A. A. Wailer, M.R.C.S. (Eng.), L.R.C.P. (Lond.) has completed the postgraduate course in ophthalmology at the Institute of Ophthalmology at Moorfields, Westminster and Central Eye Hospital, London, and will be returning to South Africa to commence practice as an ophthalmologist in Port Elizabeth.

Research Forum, University of Cape Town. A meeting of Research Forum will be held on Tuesday 7 April at 12 noon in the large A-floor lecture theatre, Groote Schuur Hospital, Observatory, Cape. Dr. C. P. Dancaster will speak on 'Rickets in the Cape Peninsula'. All interested are invited to attend.

East Rand Branch (M.A.S.A.). The annual 'Jooste Cup' Golf Competition which is organized by the East Rand Branch of the Medical Association of South Africa and open to all members of the Association will be held at the Germiston Golf Club on 12 April 1959. Entries may be submitted to Dr. K. A. Gough at P.O. Box 245, Brakpan, or by telephoning 55-2905, Brakpan.

Dr. H. Maisel, lecturer in the Department of Anatomy, University of Cape Town, has been awarded a research fellowship to McGill University, Canada, as from 1 September 1959. Dr. Maisel will be attached to the Department of Anatomy of the University and will continue his work in the field of experimental embryology. Dr. Maisel will leave Cape Town with his family on 26 June.

Victoria Hospital, Wynberg, Cape. The Honorary Staff of this Hospital have arranged a meeting at the Nurses' Home on Tuesday 21 April at 8.15 p.m. Dr. H. Jacob will introduce the subject of ACTH, cortisone, and allied steroids. There will then be a panel consisting of Drs. H. Jacob, M. Bailey, P. V. Suckling, S. Stein and Mr. J. Heselson, to answer any questions that may be put to them by the audience. All interested are cordially invited to attend.

'n Opknappingskursus vir algemene praktisyns in Ginekologie en Obstetrie is onlangs met groot welslae op Bloemfontein gehou. Daar was 27 praktisyns wat vir die kursus ingeskryf het, en die kursus het die agste tussentydse kongres van die Suid-Afrikaanse Vereniging van Verloskundiges en Ginekoloë, wat gedurende 2-5 Maart 1959 op Bloemfontein gehou is, voorafgegaan. Die kongresgangers was baie ingenome met Bloemfontein en hulle het hul seën uitgespreek oor die onderneming om 'n nagraadse mediese skool te Bloemfontein te probeer bewerkstellig.

The University of Cape Town invites members of the Cape Western Branch (M.A.S.A.) to a meeting in the Physiology Lecture Theatre, Medical School, at 8.15 p.m. on Friday 10 April. Dr. J. P. Greenhill, B.S., M.D., F.A.C.S., Professor of Gynaecology, Cook County Graduate School of Medicine, Chicago, USA, will address the meeting on 'What's new in obstetrics and gynaecology'. Dr. Greenhill is well known to students and practitioners in this country through his publications in co-authorship with De Lee and also through the Year Book of Obstetrics and Gynaecology.

Noristan Laboratories (Pty.) Ltd. Film Shows. On Tuesday 7 April at 4.00 p.m. a film on the treatment of tuberculosis with Dihydrothionate (dihydrostreptomycin pantothenate) will be shown at the Westlake Chest Hospital, Cape Town. This film will also be shown at the City Hospital, Green Point, at 8.15 p.m. the same evening. On Wednesday 8 April at 8.00 p.m. a film on the treat-

ment of psychiatric disorders with Phasein (a combination of reserpine and orphenadrine) will be shown at the Valkenberg Mental Hospital, Observatory, Cape. All practitioners who are interested are invited to attend these film shows.

Genootskap Nederland-Suid-Afrika. 'n Uitnodiging, namens die bestuur van die Genootskap Nederland-Suid-Afrika, om lid te word van die Genootskap, is deur die Tak Wes-Kaapland ontvang. Die Genootskap beywer hom om die goeie verstandhouding tussen Suid-Afrika en Nederland te bevorder. Die Genootskap lê hom ook daarop toe om 'n besef te help aankweek van die aard van die betekenis van die bande wat Suid-Afrika en Nederland verbind sedert die stigting van die nedersetting aan die Kaap in 1652. Die volgende besoeker uit Nederland is prof. M. J. Langeveld, professor van pedagogiek, algemene didaktiek en ontwikkelings-psigologie aan die Ryksuniversiteit van Utrecht. Hy sal van 8 tot 18 Junie 1959 in Kaapstad wees. Nadere besonderhede oor sy program sal later bekend gemaak word. Die ledegedel van die Genootskap bedra £1 per jaar. As u besluit om lid te word sal dit waardeer word as u u ledegeld van £1 vir die jaar 1959 sal stuur aan die Penningmeester, mnr. W. P. H. Riethoff, Thornton-Huis, Kenilworthweg, Kenilworth, Kaap.

Cancer Research. A cancer chemotherapy research programme involving a massive effort by hospitals, universities, research laboratories, industry, and the Government to discover chemical compounds that will be effective and safe in the treatment of cancer, has recently been announced by the United States Secretary of Health, Education and Welfare. The active participation of private industry is a key and unique aspect of the entire programme. Many firms are supplying valuable compounds free of charge for screening and clinical trial. For this work the Government has set aside £8,000,000 for this year. More than 40,000 chemical compounds or other materials are being tested each year on more than a million mice to uncover chemicals with anti-cancer properties. Altogether, so far, more than 70,000 materials have been put through this initial screening process. About 400-600 materials each year are now showing sufficient promise in the initial screening phases to be given intensive further analysis and testing, including tests in larger animals. In this second phase of testing which takes about 6 months to complete, more than nine out of ten materials are rejected as either ineffective or too toxic for human use. None of the drugs tested have proved to be a cure for cancer. The only existing cures for cancer are through treatment by radiation or surgery.

The World Medical Association. Dr. Louis H. Bauer, Secretary General of The World Medical Association, announced that the Association has made initial arrangements for providing its participants at the 2nd World Conference on Medical Education (Chicago, Illinois, 30 August - 4 September 1959) and the 13th General Assembly of The World Medical Association (Montreal, Canada, 7-12 September 1959) with a special chartered transportation plan. Members of the national medical associations and their families are eligible to apply for reservations on the chartered flights. In commenting upon the advantages of the chartered transportation plan, Dr. Bauer noted that the Conference dates fell during the peak season of tourist travel which might make it more difficult for the participants to obtain the regular commercial reservation they wished. The plan offered an opportunity for initial friendships to be established before the convening of the Conference, and hence, a preliminary exchange

of ideas which could prove productive to the meetings. Local welcoming committees favoured the plan since it would facilitate their endeavours to assist foreign guests in complying with government formalities. Finally, the plan would provide substantial

financial savings for the member associations, their delegates and participants at the meetings. Additional information may be obtained from: The World Medical Association, 10 Columbus Circle, New York 19, New York.

PHARMACEUTICAL NEWS : FARMASEUTIESE NUUS

MEDICAL FILMS

Smith, Kline and French Laboratories are making available, for loan without charge, a film 'The physician and emotional disturbance', for use by medical, nursing and affiliated professional groups. This film is a kinescope of a television programme presented, in cooperation with the American Medical Association, to 5 meetings of American state medical associations.

The discussion centres on the role of the general practitioner in treating mild emotional disturbances or psychosomatic conditions. Scenes of a patient's interview with his physician are included, and the interview is discussed by a panel. The panel also answers questions from the participating state meetings.

Those interested in arranging for this film to be shown should write for a booking to SKF Laboratories (Pty.) Ltd., P.O. Box 784, Port Elizabeth.

BOOK REVIEWS : BOEKBESPREKINGS

SURGERY OF THE SYMPATHETIC NERVOUS SYSTEM

Surgery of the Sympathetic Nervous System. 3rd Edition. By Sir James Paterson Ross, K.C.V.O., LL.D., M.S., F.R.C.S., F.R.A.C.S., F.A.C.S. Pp. xii+170. Illustrated. 35s. net. London: Baillière, Tindall and Cox Ltd. 1958.

This book, which has been rewritten after 20 years, is still an account of the experience of sympathectomy in the Surgical Professorial Unit at St. Bartholomew's Hospital, London, and does not cover the field exhaustively. After a brief description of the anatomy and physiology of the sympathetic nervous system, the author discusses peripheral vascular disorders, stressing the

effects of treatment and overemphasizing the use of skin-temperature recordings which are frequently illustrated in the book. The clinical grading of Raynaud's disease is set out well and most operations on the sympathetic nervous system are described here and in the chapter on arterial hypertension. The problem of arterial hypertension is carefully considered with particular reference to the results according to the renal and fundal gradings which are defined. Experiences with sympathectomy for hyperhidrosis, causalgia and visceral pain are recorded with descriptions of these conditions.

The assessment of sympathectomy in this short book primarily represents the author's opinions and should be an addition to other more detailed discussions of the subject. P.C.K.

CORRESPONDENCE : BRIEWERUBRIEK

IMMUNIZATION OF CHILDREN

To the Editor: We would respectfully refer you to an article on page 37 in the issue of the *South African Medical Journal* of 10 January 1959 under the heading 'Questions Answered'.

Under the 'Scheme for Inoculation' is recorded 'four weeks later 1 ml. poliomyelitis vaccine (S.A.I.M.R.) intramuscularly'.

This Company, which is one of the world's largest producers of poliomyelitis vaccine, feels that an article of this type should not refer to a specific manufacturer's product, and we should appreciate your printing in your next issue that Parke-Davis Poliomyelitis Vaccine may also be used for the first injection and, of course, for subsequent injections.

Parke, Davis Laboratories (Pty.) Ltd.
P.O. Box 9971
Johannesburg
11 March 1959

C. Quennell
Sales Manager

SOLID FOOD FOR BABIES

To the Editor: I am neither a doctor nor a mother—and certainly not a neonate. I really couldn't care less whether infants are fed on whales or water. But similar indifference does not apply to good writing. What an excellent and amusing letter Findlay J. Ford¹ has written. It gave me considerable pleasure. Congratulations.

J. K. Swart

P.O. Box 122
Parow
16 March 1959

1. Correspondence (1959): S. Afr. Med. J., 33, 239.

HAEMOLYTIC ANAEMIA IN THE BANTU

To the Editor: With reference to the case of haemolytic anaemia reported by Dr. Gon¹ in your issue of 31 January, I should like to point out that over a 3-year period (1956-1958) at Baragwanath Hospital, Johannesburg, in only 1 Bantu family could the diagnosis of hereditary spherocytosis be established fully. In this family both mother and son had haemolytic anaemia, splenomegaly, jaundice, numerous microspherocytes in the peripheral blood, and characteristic osmotic fragility and autolysis of the

red cells. The son was splenectomized with excellent results. A further case, a Bantu male adult, showed all the features of the cases already mentioned with a favourable response to splenectomy, but the family was not available for examination.

There is no doubt that difficulty in investigating members of the families of Bantu patients with haemolytic anaemia renders the final diagnosis of hereditary spherocytosis difficult, yet this disease is certainly rare in the Bantu. Although haemolytic anaemias are common in this group, the hereditary forms are evidently rare—which has already been reported by Cassel and Metz.²

J. Metz

Department of Haematology
Postgraduate Medical School
Ducane Road, London
8 March 1959

1. Gon, F. (1959): S. Afr. Med. J., 33, 87.

2. Cassel, R. and Metz, J. (1958): Med. Prac., 4, 278.

TREATMENT OF WARTS

To the Editor: Everybody knows how unsatisfactory the treatment of warts is, especially multiple warts. The number of different treatments alone proves this.

I should like to make a plea to fellow practitioners to try out a new treatment. Perhaps it has been used before, but if so, I have never heard of it.

The treatment consists of the administration of Sandosten (an antihistaminic) with calcium tablets. The Sandosten is combined with the calcium in a big, white effervescent tablet. I have had very good results in 2 cases, both children with multiple warts. All the warts disappeared within 3-4 weeks.

I must emphasize that this treatment should only be tried in cases with multiple warts. It does not seem to be successful in individuals with single warts.

The dosage used has been 1 tablet twice a day given for 3-4 weeks.

601 Jules Street
Malvern, Johannesburg
11 March 1959

I. Hendler